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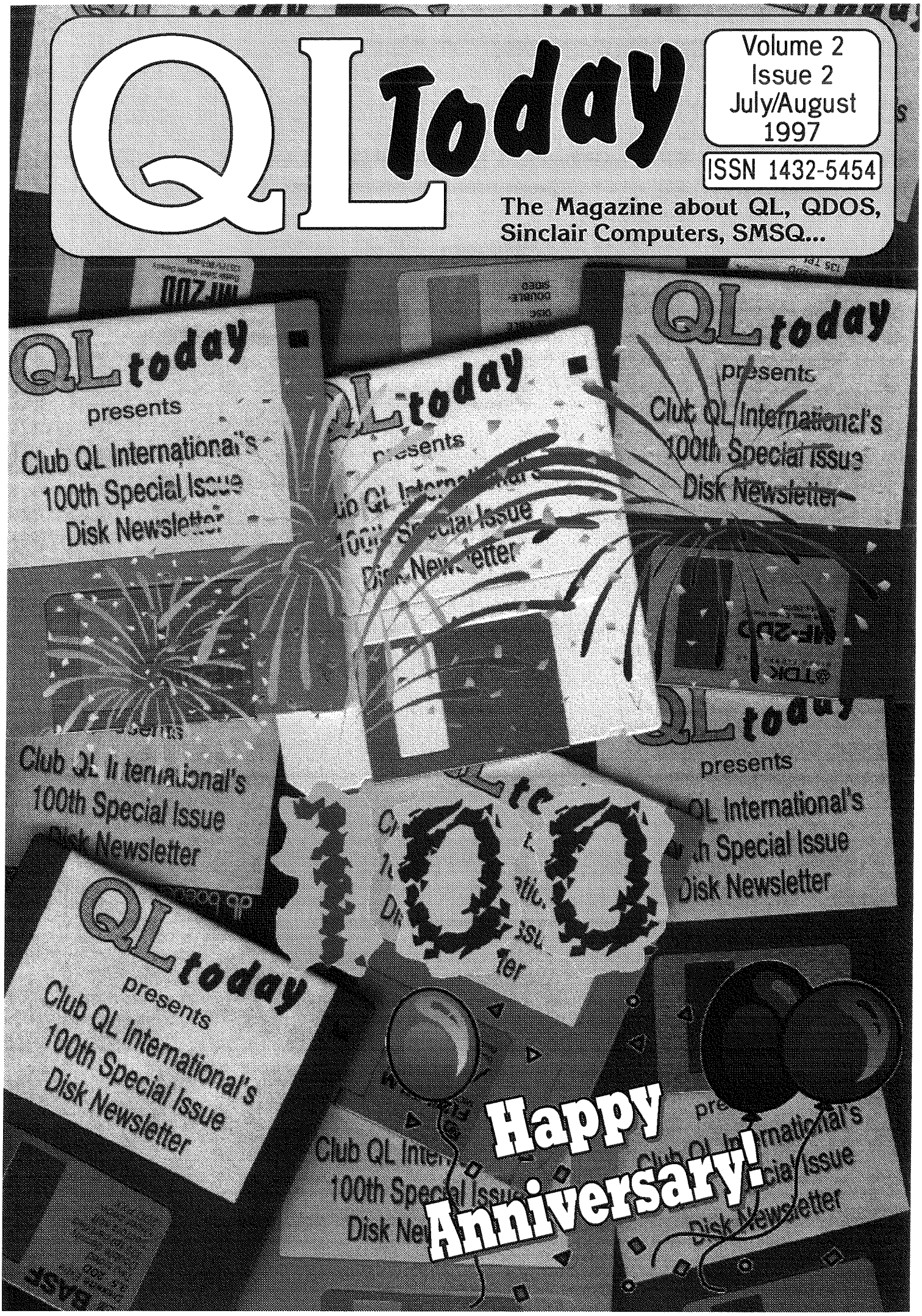

QL Today

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We welcome your comments, suggstions and articles. YOU make **QL *Today*** possible. We are constantly changing and adjusting to meet your needs and requirements. Articles for publication should be on a 3.5" disk (DD or HD) in ASCII, Quill or text87 format. Pictures may be in _SCR format, we can also handle GIF or TIF. To enhance your article you may wish to include Saved Screen dumps. PLEASE send a hardcopy of all screens to be included. Don't forget to specify where in the text you would like the screen placed.

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Issue 1:	15 April	Issue 2:	15 June
Issue 3:	15 August	Issue 4:	15 October
Issue 5:	15 December	Issue 6:	15 February

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Contents

3 Editorial
4 News
6 Just Words! - *Geoff Wicks*
7 The Competition
8 Enveloper - *Darren Branagh*
9 QLAY - Another QL Emulator for PC's - *Review by Timothy Swenson*
9 VT Code stripper - *Jonathan Hudson*
10 Of Buttons and Mouses, My Short Boot, Or Why I DO It - *Al Boehm*
12 Nibbles and Quibbles - *Derek Pope*
17 ProWesS programming: edline power - *Joachim Van der Auwera*
20 Going Dutch - *Alf Kendall*
22 Snippet's Corner - Part 5 - *M. Knight*
24 The CIA World Factbook Review - *Darren Branagh*
26 Response to Z88 Source Book Review - *Timothy Swenson*
26 Letter-Box
30 Replace - *Dilwyn Jones*
31 New Master Spy - *Dominic Lester*
32 Archive made easy - *Graham D. Lutz*
33 Accelerating Abacus - *Peter Hale*
38 Another Clock Corrector - *Ian Pizer*
38 Keycoder Quickie - *Darren D. Branagh*
39 ProWesS Delivers - Part 1 - *James Hunkins*
43 Multi-Processing, what is it good for? - Part 1 - *Nasta (Zeljko Nastasic)*
46 Bugs 'n Fixes
47 QL-Meeting in Solms, Germany - *Albin Hessler*
50 Necessity Caused the Invention of This Surrogate Motherboard - *Roy Wood*
52 Smash with Chips? - *Darren D. Branagh*
53 The Editor VERY Special edition. (Large) - *Dennis Smith.*

Advertisers

in alphabetical order

Jochen Merz Software 15, 53
PM data 39
PROGS - Van der Auwera 41
QBOX USA 27
QBranch 48-49
Quanta 19
Qubbesoft 35
W.N. Richardson (EEC) 23
TF Services 37

Editorial

Dilwyn Jones

We seem to have struck the quiet summer season again, with little happening as we take stock of the activity of the last few months. Several shows have been busy, lots of new hardware announced, progress on the emulators front and so on.

And speaking of emulators, it was interesting to find that a new QDOS emulator for the PC is available on the Web, written in the Netherlands. As Timothy Swenson says in his article, it is hardly a competitor for QPC, and currently isn't too easy to use, so Jochen Merz and Marcel Kilgus need not quake in their shoes about the future of QPC just yet! As Jochen said to me, "Would you like to go back to QDOS after using SMSQ/E for a while?" Point taken. Still, the fact that new emulators keep appearing means that it will pretty soon become a bit of a rarity to come across a computer that can't run QL software, hence the cartoon in this issue!

The show season has been quite busy, and this year we'll have summer shows too, what with one in London in July and in the Republic of Ireland in August - the latter would be a good show to attend and combine with a holiday in the lovely country of Ireland. Darren Branagh has undertaken a brave venture in organising this show, as there are few QL users in his area, so like the annual shows in the USA he will depend on support from futher away. Best of luck, Darren.

Darren has also written a couple of reviews of some Freeware Software for us this and next issue. Anyone else willing to write about the huge collection of free software available for the QL? Are you using a program which is so good you think everyone should be using it? Have you come across a program which is so bad it ought to be avoided like the plague (I must admit, it is very rare to come across a really bad QL program!). Just write a short review of it (up to one page is usually about right) and send it to us on disk as a plain text, Quill, Perfection or Text 87 file. If you can include on the disk, a copy of the screen display for us to print as a screen dump, or a copy of the program itself for us to do this if you have no program (such as Screen Snatcher or Grabit) to help you do this. If in doubt, get in touch before doing the review, especially if you want to check if someone else has written a review of the same program! We'll do our best to return your disk as soon as possible.

Simon Goodwin's FPU extensions last issue were well received, with most people saying this was a long overdue development for the QL. A few people said the article was too advanced, and a bit beyond them. OK, it wasn't the easiest of subjects, so perhaps that sort of reaction was to be expected.

A major QL software project of late has been the Prowess software from PROGS. This provides a modern windowing and font system for the QL, and PROGS have already converted much of their software such as Line Design to run using it, and more will appear as authors get to grips with programming using Prowess and Proforma. We've noticed that not much was being written about it. In this issue, Jim Hunkins takes a look at this system from the beginning, looking at the installation process, for example. In future issues, he hopes to take a closer look at this system. Also in this issue, Joachim van der Auwera provides a programming example for Prowess.

One of the side effects of the introduction of the new displays such as the VGA and SVGA supported by QXL and QPC, or the Aurora displays, has been that BASIC programmers find themselves unable to easily adapt to the new programming techniques for these displays. To help a little, I have written a set of 9 extensions which help in this respect. They are on the cover disk as well as printed in the magazine.

QL TODAY'S second Cover Disk

As our second cover disk, we present the special issue 100th disk based newsletter from Club QL International, a non-profit self-help group for all QL users.

The disk contains an introduction from Club QL chairman, Mike Kenneally (the file called QL100AA_DOC - read it with Quill), the newsletter itself (packed full of letters from members past and present), and some Zipped program files referred to in the newsletter itself.

To start the cover disk, enter the command LRUN FLP1_BOOT. This will start the main menu and load the title screen. From the menu, press a function key to select one of the available options:

F1 - Start Xchange Quill from the disk and loads the 100th issue newsletter.

F2 - Information about the club

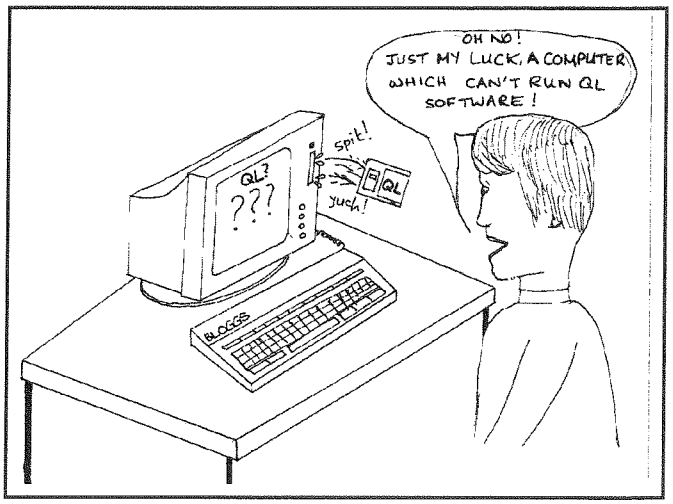
F3 - Set the default devices if required

F4 - Unzipper. The program files have been Zipped (compressed), so you have to Unzip them before you can use them. Unzip is supplied on the disk; all you have to do is choose which package of programs to be unzipped, from the list presented.

F5 - Quit from the menu.

QL Today would like to extend our grateful thanks to Mike Kenneally and Graham Lutz of Club QL International for their hard work and co-operation in making this cover disk possible. If you'd like to join Club QL International, you can write or email to Mike Kenneally at the address given in the first page of the newsletter. We look forward to the next 100 issues, Mike!

Dilwyn Jones



News

J-M-S is on the Web

Believe it or not, you can find Jochen Merz Software in the World Wide Web. I still do not like the idea of paying far too much money to Deutsche Telekom, but it seems to be essential to be on the web if you want to be taken seriously. The fax syndrome seems to happen here too: 10 years ago, having a fax was luxury. The question was: "Do you have a fax?". Four or five years ago, the question changed into "what is your fax number?". Nowadays, it is essential for companies to have a fax, and it is even considered to be normal for private individuals. The same seemed to have happened with eMail, and is happening with a web presence. I do not like this kind of pressure, but you don't seem to be able to be taken seriously without it.

Half a year ago I did not consider creating a web site, but I got some QPC orders from people who left the QL some time ago and came back because they found QPC information on other peoples web sites. This is quite positive, and if it helps bringing people back then it is worth the effort.

But, as we QLers want to be different, I do not do it like other companies and shut down support mailboxes and therefore force people to use the web. My BBS's will stay online, and they will provide the main support for my customers. Ask people who tried to download stuff from the web: it may take ages. I find that, even with my ISDN connection, the cps rate drops often down to 150 cps or so. Being online is rather expensive in Germany too. Therefore, even a long distance call, but to a 28800 connection at full speed, is cheaper most of the time (especially at night). In addition, web FTP does not recover like ZMODEM does.

If the web site serves its purpose to bring some QLers back to the scene and maybe even generate new customers then it justifies the expense. If not, then I'll shut it down in eight months or so. (Another reason to keep the BBS going - much cheaper to run both lines than hiring server space).

If you want to have a look:
http://www.j-m-s.com/smsq/

Another facility which proved to be more useful is eMail: it has helped getting the US-show organised and getting some other things scheduled. The eMail editor which I have to use is a real pain, and I hope, something will be available for QDOS & SMSQ soon. I guess that sending eMails larger than 32kBytes or so is regarded as being impolite (unless you get the OK from the receiver first), and I can understand why: receiving a single larger eMail took 15 minutes and longer here! Therefore, I will not accept any eMail larger than 32kBytes.

You can contact me now:
smsq@j-m-s.com

Minerva V1.99

Tony Firshman of TF Services reported, that there is a problem with V1.98 and ADATE.

The bug will be fixed in V1.99 or maybe as a software patch for V1.98.

Modem Connections

Graham Underwood has been busy designing a little "black box" to appear as a telephone line between two modems, which allows QL users who are new to modems to practise establishing contact between two computers, to have a go at uploading and downloading files between machines without running up telephone charges. It also means that someone with bulletin board software could bring it along to a QL show or user group meeting for new users to learn how to access it without worrying too much about the cost of the telephone calls. This would, though, require a slight software modification to the BBS software to allow for the way ring tones are handled, since this device is of course not a real telephone line. Although this device will not be commercially available, it appears that Graham would be prepared to build them to order, and a limited number have already been built for local user group useage. The device has already been demonstrated at Graham's local user group in the Nottingham area in England, when Derek Stewart brought his BBS system along for demonstration. Graham will supply this device (it doesn't yet have a name!) on request for £23.00. Although produced primarily for QL users, Graham says that his device will in principle work with any computer or modem. Further information from

Graham Underwood, 28 Sime Street, Worksop, Notts., England, S80 1TD. Tel. 01909-531405.

NEWS FROM QUBBESOFT P/D

In addition to supplying collections of QL software and clipart on HD disk and EZ-135 cartridge, Qubbesoft can now also supply them on Iomega Zip 100K cartridges for QXL/QPC users with Iomega Zip drives on their systems.

The literature collection formerly known as EZ-Literature has been renamed to the Electronic Book Library as a result. This cartridge consists of a multitude of classic novels, religious material and information files.

Qubbesoft P/D soon hope to launch a second cartridge of Line Design clipart, to add to the existing collection, watch Qubbesoft's adverts for details.

Issue 24 of their catalogue is out at the time of writing, with issue 25 imminent, probably available by the time you read this. Some programs previously available from PROGS have now been kindly released to the PD scene, these include The Painter and QRactal, the pointer driven graphics and fractals programs. The future of The Clipart package is as yet undecided.

Bruce Nicholls' Screen Dazzler program, previously a commercial package from Quo Vadis Design and before that, DJC, has now been kindly donated to the PD scene.

Qubbesoft have release their 15th disk of general PD/Freeware software. As usual, it consists of 10 programs, mostly requiring pointer environment. The programs include Q-Eyes (recently reviewed in QL Today), a pop-up Calculator, Minefield game, and Phil Jones' Grabit screen copying utility, now in a version able to handle all Aurora screen sizes. Ron says that PD16 will soon be available, again consisting of 10 programs requiring pointer environment.

Disk Specials 44, Archivers Control Panel by Thierry Godefroy, has been updated to version 3.3 (see news column in the last issue). This package provides a pointer driven front end for Zip and other archiving utilities.

PGP (Pretty Good Privacy) - see Tim Swenson's review in a previous issue - is also now available from Qubbesoft P/D. Describing this as 'the program governments may prefer you not to use', Ron Dunnett describes this file encryption utility as being one of the most secure around.

Jonathan Hudson's port of Ghostscript is now up to v3.33, available from Qubbesoft P/D as a nine disk set, previously a six disk set, including executables, documentation, fonts and source code. The package can now use high quality GNU fonts, apparently. Ron says that the sources include some code for handling JPEG graphics, the compression system used for storing compressed photographs, so some enterprising QL programmer could probably make use of these in graphical applications. (Rumour has it that a QL programmer in the north of England is working on a QL/PC graphics conversion package, along the lines of Graphics Workshop on the PC, though this project is rumoured to be high quality commercial software rather than PD software).

If there appears to have been a flurry of activity on the PD front from Qubbesoft P/D recently, it is because Ron is now being assisted by Graham Underwood, leaving Ron free to concentrate on hardware developments.

Qubbesoft are now about to produce a second batch of Aurora cards, following a slight delay. The Goldfire expansion unit is now in prototype form, having received samples of the processor and disk controller chips, though they are still waiting for a chip used in the power supply. The Ethernet card has been put on hold to allow work to be focused on getting the Goldfire card to market in the early autumn, following delays caused by project designer Nasta's month spent working in America. The Aurora bidirectional parallel port, being designed by Di-Ren, is still not yet available.

COLOUR DRIVERS: Ron Dunnett offers his personal apologies for the delay in releasing the 256 colour mode drivers. Work is going on, and they'll be released as soon as possible. The delay is unfortunately out of Qubbesoft's control, says Ron.

News from W. N. Richardson & Co.

Bill Richardson informs us that he has acquired a sizeable number of unused or little used QL circuit boards. These would be ideal for building into a cased system, or to keep as spare parts for your main QL. Bill hopes to sell these at realistic prices, from £20 to £50, depending on condition, ROM version etc, so watch his adverts for details. Bill also attends most QL shows and workshops, so call by his stand to inspect the boards if you want one with a particular ROM version or spare part on board.

W. N. Richardson & Co., Woodpeckers, 6 Ravensmead, Chalfont St. Peter, Bucks, SL9 0NB. Tel/Fax 01494-871319

TCP/IP News

Kresimir Saric's work on producing a TCP/IP system for the QL, which could eventually lead to a news client, email client and in due course a full Web browser, has unfortunately got a little bogged down due to the Croatian author's day-job pressures, so the project is running behind schedule. The author is writing the implementation in assembler rather than merely porting over a C source application, for speed reasons.

Graham Underwood in England is reported to be liaising between Quanta and Kresimir Saric in Croatia on the project, which is seen as valuable to the QL's future. If QL users are able to use their QLs directly to send email and access the Web, this could obviate the need for some QL users to have a PC at all, since many just use their PCs for what the QL currently cannot do. It would also mean that in future the QL-related Web sites could in fact be QL originated, whereas most are originated on other computers at the moment.

Just Words!

The new JUST WORDS! address and telephone number are:

Geoff Wicks, 28 Ravensdale, Kingswood, Basildon, Essex SS16 5HU.

Tel: 01268 - 281826

I apologise to both customers and traders who may have found the JUST WORDS! service less efficient than usual over the last few weeks as a result of my unexpected move back to the UK for domestic reasons. Over a period of almost 3 months I had no access to the JUST WORDS! stock, administration and source code.

Thanks are due to Quo Vadis Design and QBranch who helped to keep JUST WORDS! alive during this difficult period.

Geoff Wicks

QBranch News

For just £16.00, QBranch will supply Aurora users with The Braquet, a two piece black plastic bracket for mounting an Aurora board into a PC tower case.

QBranch can also supply black binders suitable for holding copies of QL Today. The black two ring binders cost £6.50 plus £1.00 postage and packing, and will hold the 6 issues of a single volume, says Roy Wood. He also says he can supply back issues of QL Today for those who may not have subscribed since issue 1, or who may have lost single issues.

The pointer driven home accounts program QCount, written by John Miller, previously described in these pages is now available from QBranch at last, price £25.00. Unfortunately, Roy Wood says that there is no further news on work on the Z88 file transfer package and the Route-Master type application for the QL.

Finally, Roy Wood says he has 5 complete QL User Guides to clear to make room in his house. All he wants for these is the cost of postage. These complete manuals are a little difficult to obtain nowadays, so contact Roy quickly if you'd like on of the five available!

QBranch, P.O. Box 7, Portslade, East Sussex, BN41 2ND

Tel: 01273-386030 Fax: 01273-381577

■

Just Words!

Geoff Wicks

Astute readers may have noticed that JUST WORDS! advertising has disappeared from QL Today. I do not know whether this is an occasion for sorrow or celebration. Sorrow is always present when a regular advertiser disappears from a magazine. It is something to which QL users are accustomed. Celebration is also appropriate on this occasion because JUST WORDS! has achieved its aim and has shown QL software to be still viable.

In the first issue of QL Today I wrote about my ideas in running JUST WORDS! and quoted Dilwyn Jones:

"Rather than have just a very small number of major suppliers, more small companies or individuals will be able to afford to promote and sell their own products."

Since I wrote the article events on the QL scene seem to have moved in the opposite direction with QBranch taking over Miracle's marketing and Quo Vadis Design's software, but my experience would indicate Dilwyn's analysis of the situation was still correct. From the beginning I had no plans to become a "multinational", but wished to remain a small, specialist software house.

JUST WORDS! proved to be a viable project, although there were two financial complications. The software was, for historical reasons, slightly underpriced but this appears to have been compensated by the volume of sales. The

bundling of the programs into the "Words Package" and the "Writer's Pack" at a discount price has proved to be a successful marketing technique. Over a half of my customers have bought all three programs.

More serious for the viability of JUST WORDS! was the closure of IQLR. Like many other QL Traders I had paid for a year's advertising with no return. The closure of IQLR had coincided with an unexpected major loss at a QL show, and this was the point at which I almost abandoned the project. Instead I decided that QL Traders must take the initiative and wrote to Jochen that every crisis is a challenge. We have survived many QL crises in the past and should survive this one.

I was well rewarded for my perseverance. Although software usually does not sell well in the summer, the next few months proved to be the most profitable in the JUST WORDS! history. By the end of the year I had easily covered costs and had there been no IQLR loss would have made a comfortable profit. The disadvantage of high sales is that you soon reach saturation point - the point at which most people who are going to buy a product have already bought it. JUST WORDS! has now reached this point and advertising is no longer viable.

JUST WORDS! software has sold well, even though fewer than 1 QL user in 10 has bought it, which shows that the QL can still support specialist software. I have proved a small software house can maintain a high advertising profile for over a year and still be profitable.

JUST WORDS! will not be disappearing from the scene. Although there are no new products in the pipeline, time permitting, the existing programs will be developed and improved. QL-THESAURUS would benefit from a pointer environment version and STYLE-CHECK may be ready for a rewrite to take advantage, among other things, of high resolution screens.

JUST WORDS! was not an official trading name, and I did not have a separate "business" bank account. The name gave an identity to my software. It was short, snappy, and embraced several concepts. "Just Words" in English often means an empty promise, which invited users and reviewers to write that the software was better than the name implied. QL Today's editor fell into this trap in the first issue of QL Today when he wrote, ".....referred to in his literature as 'Just Words', rather understating the quality of his software." More seriously "Just" in the meaning of "Only" identified the programs as software for writers and word lovers, and in the meaning of "Right" indicated that it helped the user to find the correct word.

Earlier this year there was an unfortunate hiccup in the JUST WORDS! progress as a result of my domestic situation. A Dutch court, following an administrative muddle, gave me three working day's notice of a preliminary hearing of divorce proceedings and then lost my letter asking for an adjournment. They proceeded in my absence claiming that my letter had not arrived in time, which as it had been sent by registered post, I could prove was a lie. The practical effect was that I was unable to get access to my stock, records and source code for almost 3 months, which disadvantaged me, other traders and clients. I am sorry to all who were inconvenienced by this, and grateful that sales could continue via Quo Vadis Design and QBranch.

Legally JUST WORDS! can now sue the Dutch state for damages. What an interesting thought! A QL trader sueing the Kingdom of the Netherlands!

■

The Competition

With this issue, not only are we giving away a cover disk, but also the very last ProForma Font Pack from those nice people at PROGS in Belgium. The licence they took out for the Font Pack has now expired and this will be the last ever copy from PROGS!

For anyone who uses Proforma or Prowess-based software such as Line Design, this Font Pack gives you 100 high quality fonts to add to those supplied with your software. The pack has been sold by PROGS for 3,000 Belgian Francs (about £60).

What do you have to do to win this pack?

For some time, I've been thinking that calling us 'QL users' may not be good enough lately, what with all the emulators about, what with the Aurora and so on. So what I'd like is a new collective noun to describe QLers. It has to be short, catchy and recognisable. The most original and apt term coined will be rewarded with this, the last of the Proforma Font Packs. What's more, if we get a good enough response, we may even throw open the decision on who wins the readership in the next issue.

The closing date is, therefore, August 30th 1997.

Please send all entries to Dilwyn Jones at the address inside the front cover.

■

Enveloper

Darren Branagh

A simple little basic program for printing a list of names and addresses on a HP Deskjet 500 printer. The names and addresses are held in a list of DATA statements at the end of the program. Simply load the envelopes to be printed into the envelope feeder on the Deskjet. This program will prove useful when a mailing list or circular needs to be sent to everyone in the list on a regular or occasional basis, but please not that there is no facility to select individual names/address from the list for printing.

```
100 CLS: CLS#0:PAPER 0:INK 7:CLS
110 PRINT "            ENVELOPE PRINTER"
120 PRINT "            ================"\\
130 OPEN #3, ser1 : BPUT #3,27,38,107,51,71 :REMark HP 500
140 INK 4:PRINT '   KEY "A" FOR COMMUNITY ALERT LIST,'\'   KEY "S" FOR S.P.C.A.
LIST' :INK 7
145 PRINT \\: PRINT "   ENSURE ENVELOPE IS CORRECTLY "\"   LOADED IN PRINTER,(LEFT
JUSTIFIED,"\"   PRESS BOTH FEED BUTTONS TOGETHER "\"   TO LOAD THE ENVELOPE)"\\
150 a$ = INKEY$(-1)
160 IF a$ == "S" THEN
170   RESTORE 32767:REMark top of SPCA data
180   t$ = "         Co. Wicklow S.P.C.A."
190 ELSE
200   RESTORE
210   t$ = "         Community Alert"
220 END IF
230 READ n : PRINT t$!n!"Envelopes"\\
240 FOR j = 1 TO n
250   PRINT #3,t$ \\\\\\\
260   PRINT t$ \\\\
270   FOR k = 1 TO 5
280     READ a$ : INK 6:PRINT #3, TO 33; a$
290     PRINT TO 10; a$ :INK 7
300   END FOR k
310   BPUT #3, 27,12
320 END FOR j
330 PRINT \\\\"FINISHED!"\\\
340 REMark **************************
350 DATA 22
360 DATA "Mr. Andrew Cullen,","","Brockagh.","",""
370 DATA "Sgt. Tim Cronin,","Mullinaveigue,","Roundwood,","Co. Wicklow.",""
380 DATA "Mr Hugh Cullen,","Cullentra,","Rathdrum,","Co. Wicklow.",""
390 DATA "Mr Pat Cullen,","","Laragh E.","",""
400 DATA "Garda Richard Galvin,","Garda Siochana,","Rathdrum,","Co. Wicklow.",""
410 DATA "Mr John Godden,","","Glendalough.","",""
420 DATA "Mr Liam Hawkins,","","Annamoe.","",""
430 DATA "Mr Seamus Holden,","","Laragh.","",""
440 DATA "Mr Willie Kavanagh,","","Knockfinn.","",""
450 DATA "Mr Pat Kelleher,","","Glendalough","",""
460 DATA "Mr Finian McEvoy,","","Laragh","",""
470 DATA "Mrs Kate McGrath,","","Kilifin","",""
480 DATA "Mr Tommy McGuirk,","","Laragh","",""
490 DATA "Mrs Kathleen Merrigan,","Ard-na-Greine,","Kilifin.","",""
500 DATA "Mr Thomas Miley,","","Laragh E.","",""
510 DATA "Mr Brendan Murray,","","Glenmacnass.","",""
520 DATA "Mr Sean Nolan,","","Post Office.","",""
530 DATA "Mr Paddy O'Gorman,","Ard Bracken,","Ballard,","Rathdrum,","Co. Wicklow."
540 DATA "Mr Tony O'Sullivan,","Combe Pyne","Glenmacnass.","",""
550 DATA "Mr & Mrs Payne,","Ballinacorbeg,","Annamoe.","",""
560 DATA "Fr. Noel Reynolds,","St. Kevin's,","Laragh","",""
570 DATA "Sgt. Pat Stapleton,","Garda Siochana,","Roundwood,","Co. Wicklow.",""
580 REMark Start SPCA DATA
```

■

QLAY - Another QL Emulator for PC's

Review by Timothy Swenson

QLAY is a QL emulator for MS-DOS or Win95 recently released by Jan Venema. It was announced in the newsgroup comp.sys.sinclair. Upon seeing the announcement, I quickly downloaded the program from Jan's web page. QLAY is freeware and may be freely distributed. The program comes as a ZIP file and is extracted using PKUNZIP. QLAY is at version 0.7 so it at the "proof of concept" stage of development.

I first tried QLAY on a 386/33 with only 8 Megs of memory. It quickly failed. The short documentation that comes with QLAY says that the minimal configuration is a 386 with 16 Meg of memory. Next I tried it on a 486/66 with 16 Meg. Within a few seconds, there was the familiar F1/F2 screen. Using a VGA monitor, the aspect ratio was perfect. It looked just like the QL screen. The documentation said that a 486/66 runs the emulator at the speed of a standard QL. To get any speed equal to a Gold Card you will probably need a fairly fast Pentium.

Like other QL emulators, namely QLEM, QLAY has the QL ROM stored in a separate file. This allows it to load in different ROMs If you have the ToolKit II ROM code stored in a file, you can merge it with the QL ROM that comes with QLAY and get the full TKII extensions. The documentation details how this is done.

QLAY only supports MDV_ for files or devices. It does not yet support SER, FLP or NET. Microdrives are 178K MS-DOS files that QLAY can treat like a Microdrive. QLAY comes with three example MDV_ files; EXAMPLE.MDV, EMPTYDSK.MDV, and QUILL.MDV. If you need additional MDV files, just copy EMPTYDSK.MDV to another file and you have another "formatted" Microdrive cartridge. You tell QLAY which MDV file to load when it starts. It supports up to 8 different MDV files. To load QLAY with the QUILL.MDV file and EXAMPLE.MDV, you execute QLAY this way:

```
QLAY -1QUILL.MDV -2EXAMPLE.MDV
```

QUILL.MDV becomes MDV1_ and EXAMPLE.MDV becomes MDV2_. You can also make the Microdrive file read-only write-protected) by adding an R in -1RQUILL.MDV.

QLAY supports both 128K and 768K versions of a QL. Adding the -S argument runs QLAY in 768K mode. QLAY also supports different resolution modes using a -D argument. Mode 1 gives the best aspect ratio, but is the slowest mode. The PC screen modes sizes are:

Mode 0 320x200x256
Mode 1 350x640x16
Mode 2 400x640x256
Mode 3 480x640x256
Mode 4 800x600

The documentation says that QLAY may choose to ignore the mode settings you give it.

Since QLAY comes with a Microdrive file with QUILL, I had to try this. I executed the program as:

```
QLAY -1QUILL.MDV
```

QLAY fired up and popped up the F1/F2 screen. I pressed F1 and withing a few seconds the QUILL loading screen came up. Then soon QUILL itself come up. It looked exactly as it does now as I'm typing this article into QUILL.

QLAY does not come with any program to get a QDOS file into an MS-DOS .MDV file. I expect in the future it will. Since QLAY does not support SER devices, you can not print out what you type into QUILL. This means that QLAY is not ready to be used as a fully working QL.

This version of QLAY is not ready for prime-time. It is a good beta program that shows that the core part of the emulator has been written and works. The next step is to add the features that make QLAY usable as a QL.

I don't see QLAY as a serious threat to QPC. I see QPC as a complete replacement of a (Super) Gold Card QL. Once QLAY is more developed, I see it as being equal to a QL with a Trump Card. With only 768K, you are not going to be running Ghostscript on QLAY. If QLAY continues development, it will be a good alternative to anybody that has a PC and only needs a Trump Card-level QL. With my Gold Card QL, QPC takes me into the future, QLAY takes me into the past. And being Freeware, you really can't beat the price of QLAY.

QLAY is available from Jan Venema at
http://www.inter.nl.net/hcc/A.Jaw.Venema

■

VT Code stripper

Jonathan Hudson

Following Ian Pizer's note about removing unwanted control codes from text captured

from VT100 or ANSI bulletin boards or the internet, here's a small 'C' source that removes (the vast majority of) such escape codes.

```
#include ‹qdos.h›

/*-------------------------------------------------------.
| * Somewhat simple vt code stripper                     |
| * (every office party should have one)                 |
| * ex vtstrip,infile,outfile                            |
| *                                                      |
| * compile as:        qcc -O -o vtstrip vtstrip.c       |
| * (or whatever cc and _c files are called on your OS)  |
| * compiles to all of 1536 bytes                        |
'-------------------------------------------------------*/

int main (int ac, char **av)
{
   int rn = ERR_BP,;
   long stdin,stdout;
   char *sp;
   short nc;

   sp = *(av + 1);
   if((nc = *((short *) sp)) == 2)
   {
      unsigned char c, inesc = 0;

      sp += 2;
      stdin = *(long *)sp;
      sp += 4;
      stdout = *(long *)sp;

      while(io_fbyte(stdin, -1, (char *) &c) == 0)
      {
         if(inesc)
         {
            if(c › ';' && c != '[')
            {
               inesc = 0;
            }
         }
         else
         {
            if(c == 27)
            {
               inesc = 1;
            }
            else
            {
               io_sbyte (stdout, -1, (char)c);
            }
         }
      }
      rn = 0;
   }
   return rn;
}
int (*_Cstart) () = main;
```

■

Of Buttons and Mouses, My Short Boot, Or Why I DO It

Al Boehm

The debate in QL Today on whether to button or not has caused me to reconsider the way my system is set up. I came to the conclusion that while Buttons are really neat and handy for many people, they are not for me. On the other hand my alternate DO method has parts that others may find useful. The listing and explanation of Jochen Merz's boot in Vol. 1, No. 1 of QL Today was an eye opener. I have used a lot of it, but not in my boot!

WHY

Some background on how I use the QL is needed. At work, behind me, I have a PC with a QXL installed. On my desk in front is a MAC PowerBook with Q-Emulator installed. I also have access via either net to a large variety of main frame and supercomputers. I do a lot of programming (I have written over 100K lines of SuperBasic) which has to be transferred to others for use on PC, MAC, Silicon Graphics, or other systems. These are typically algorithms written in SBasic (or SuperBasic) and converted to C, Fortran, or whatever for use on other systems. Nothing, whatever the cost, beats SBasic for rapid algorithm development and checking.

The main reason this is true is the fast turn around of debugging/exploratory runs. On the QXL, I can easily average over 10 runs in a minute each one fixing some bug or trying a different fitting scheme to a curve. With CodeWarrior, the top of the line, really good MAC programming environments, I do good to get four turn arounds per minute. I mess with POKES and system variable only when I have to. Nevertheless, I frequently lock up the system. Thus, a fast boot-up for me is essential. My QXL boots up in 7 seconds. Compare that with Windows 95 or the MAC which can take over a minute!

HOW TO DO IT

DO is a Tookkit II command that starts execution of an unnumbered SuperBasic file. It can be emulated without Toolkit II by using

MERGE. The file can be very long. Also DO's can be chained; the last line of one DO file can DO another file. It can be used in programs, but when it is done, execution stops. So DOs in programs are limited to terminating actions like: DO WIN1_Print_errors or DO WIN1_TydyUp where Print_errors is a file you made to print some debug values and TydyUp is a file you made to close files, etc.

However, my main use of DOs is to boot only those things that are needed for a given computer session. Thus, my QXL boot is short:

```
rem QXL BOOT. if ver$(1)>2.74 for SMSQ/E 22 May 1996
IF ver$(1)>2.69 then OS$='SMSQE':else OS$='SMSQ'
IF OS$='SMSQE' then HOT_GO: kbd_table US:LRESPR win1_init_SDump_rxt
IF OS$='SMSQ' then TK2_ext:LRESPR win1_util_ptr_gen:LRESPR win1_util_wman
lrespr win1_init_qloadref_bin
data_use win2_basic_: prog_use win1_BOOTS_
ALTKEY 'u','data_use win2_basic_:prog_use win1_boots_',''
ALTKEY 'q','ED Qfind(QL$)',''
ALTKEY 'w','WINDOW 512,220,0,0: WINDOW#2,512,220,0,0:
WINDOW#0,512,36,0,220: paper 2:ink 7:paper#2,4: ink#2,0:paper#0,0: ink#0,4:CLS:
CLS#0',''
ALTKEY 't','WINDOW
255,220,255,0:WINDOW#2,255,220,0,0:WINDOW#0,512,36,0,220:paper 2:ink 7:paper#2,4:
ink#2,0:paper#0,0:ink#0,4:CLS:CLS#2:CLS#0',''
ALTKEY'b','window 512,256,0,0:paper 0:cls:window 512,220,0,0',''
ALTKEY 'c','for i_i_ = 0 to 2:csize#i_i_,1,1',''
WINDOW 512,220,0,0:WINDOW#2,512,220,0,0:WINDOW#0,512,36,0,220:paper 2:ink 7:
paper#2,4:ink#2,0:paper#0,0:ink#0,4:CLS:CLS#0
```

Most of the time, the QXL is started with SMSQE which has added capabilities. But this boot can handle either SMSQ or SMSQE by checking the installed versions.

By setting QL$ equal to a name, the ALTKEY q is handy for repeated EDs to a procedure or function which is under development. Qfind is a QloadQref function that returns the line number of a name. Aside from setting ALTKEYS for windows (note ALTKEY b erases the screen.), the only other important thing that is set is PROG_USE win1_boots which allows a DO to apply to the directory called BOOTS.

Thus, my boot only does the bare necessities. What if I need to start Xchange or use FiFi to find a file?

A TAILORED BOOT

To start the editor ARCED, I type DO arced. Which is not much shorter than EX WIN1_UTIL_arced. But one does not need to remember what directory arced is in. Plus there are other versions of ARCED with various sized windows - EGA, etc.) Futhermore, starting some programs requires additional things to be done. For example, to start QLiberater, I type DO QLIB. The QLIB file is,

```
REMark: To initialize hot key running of QLiberator
ALTKEY 'r','liberate "ram1_run":qw "ram1_Qlib","ram1_run":qw "ram1_run"',''
COPY "win2_QLIB_obj" TO "ram1_QLIB_obj"
PRINT #0,"Q_Liberator Loading ..."
LRESPR 'win2_Qlib_sys'
QLIB_USE ram1_,ram1_
```

Which I only use occasionally and certainly would forget how to type in the proper commands to start it. The QLIB file is a boot for Qliberator which is why the DO files are kept in a directory called boots! Even if you have a long boot like Jochen's, it is useful to have a directory of boots for those programs you rarely use or for various default versions of a program. Give them easily recognized names which you can DO.

Generally I only multi-task 5 or so programs at a time so that cycling through them with CTRL-C is no problem. Plus programs like FiFi load so rapidly, I DO it, use it, then end it.

Admittedly, Buttons would make selection of a program faster.

THE CHRISTMAS TREE EFFECT AND MY POOR EYES

When there is a major breakdown in an aircraft cockpit, so many red warning lights go on that it is difficult to find the one that is really important and if not attended to will cause you to crash. Aircraft safety engineers call this the Christmas Tree Effect. Ed Tufte in his books "The Visual Display of Quantitative Information" and "Envisioning Information" warns about chartjunk, visual vibrations, and the eye of the viewer having to move back and forth between areas. He has also written a pamphlet "Visual Design of the User Interface" which should be required reading for anyone designing a computer interface. I will quote just one grain of wisdom from it, "... a complexity of marks generates an exponential complexity of (falsely perceived) shapes. Nearly all the time, such surplus visual activity is disinformation, clutter, noise."

Thus, I feel justified in having only one thing (no buttons) on my screen at one time. On the other hand, the QL buttons appear to me to be of a better design than that of Windows or MAC icons. Further, when I was 23, I remember doing my calculus homework with my young children crawling all over me. Now that I am 54, even a quiet radio in the next room causes me to lose focus. In addition, recently I have had to undergo eye surgery. Bless Jan Jones, Sir Clive, or whoever it was that implimented CSIZE in SuperBasic. Without the large letters, I could not have continued to work.

The point I am trying to make is that people are different and what is smart looking to one is distracting to another. Of course, both are right. So my advice is to keep improving the Buttons but don't expect everyone to use them.

TOUCHING AND THE MOUSE

When you first learn to play a piano, a guitar, etc. you tend to look at your fingers. The trouble with that is, you lose track of where you are in the musical score. (Of course some people play by ear.) If you don't touch type, you have to look at the keyboard to find the right letter. Not only does this slow you down, the constant looking back and forth causes not only mistypes but also more logic errors. If you don't touch type, one of the smartest things you can do is to use one of the QL touch typing programs - they are good, easy (even fun) to use, and they work. You'll thank me for it.

The mouse does away with lack of touch typing to some extent in that one does not have to look at the mouse, only at the mouse cursor. However, a mouse has problems of its own. The most critical to me is that it forces your fingers away from the touch typing home keys. Thus, slowing you down when you go back to typing.

On the other hand, if you don't touch type but do have an efficient graphical interface, the mouse is the tool of choice. Since most people don't touch type, it is no wonder there are so many mouses! Of course, a mouse or other type of hand input is needed for sketching. I have a mouse. But I don't have it hooked up for the QXL!

The developers of such pointer environment programs such as QD are to be praised that they allow the option of keystroke inputs for such as I. ***[Jochen's comment: thanks, Al, for pointing out such an interesting way. I guess I have to modify my BOOT now after having read your article. The aim of the Pointer Environment is to please most people - mouse and non-mouse users, people who like to use menus and people who want the action on a single keystroke.]***

■

Nibbles and Quibbles

Derek Pope

Introduction

As I work with various bits of software and read my way through magazines, I often scribble notes about things on which I feel inclined to comment. Once I've built up a few scribbles, it's time to do something with them so this time, I've decided to send them to QL Today. I've entitled this Nibbles and Quibbles because I hope there are a few useful bits of information in here (the nibbles), the quibbles are probably self evident but not to be taken too seriously.

QPAC2

I've seen a number of people using this interesting piece of software and often played with it myself at our Dorset subgroup meetings. It seems to provide many of the things I want

from a 'desktop' but there are some strange bits missing.

a). Why is there no option to change the media name on the label on a disk?

b). Why is there no option to copy one disk to another, subdirectories and all? ***[This would be a pretty useful feature! However, Diskmate and Cueshell allow you to do this easily - Editor]***

Does no-one else ever need to do these things? OK, I've written basic programs to handle both of them but they would seem to be obvious items to include in the package when it is next being extended.

Incidentally, I saw in the last Quanta magazine that there is a recent new version to provide more channel information to SMSQ/E users but no indication as to how existing users get updates. Do they?

[Existing users can get updates from Jochen Merz Software or QBranch - Editor]

Toolkit 2 and SMSQ/E

Although I've read it through several times, I still find myself making reference to the original Sinclair "QL User Guide". Since I also use a lot of the facilites in Toolkit 2 I also reference the manual for that from time to time and find the layout (I have the Super Gold Card version) annoying to the point of frustration.

I've scanned through the documentation for SMSQ/E and that adds in a lot of new (and exiting) facilites but if I buy SMSQ/E I will have three sets of manuals to claw my way through. Has anyone produced a composite manual of the facilities now available?

I know that QL World started to print pages for a new manual which incorporated all of the current keywords but it stopped when the publication folded and I am not aware that there is any comprehensive QL manual available.

[Readers: let us know if there is any interest - if so, we may start doing it!]

Modern 3.5" Diskette Drives

I have seen items suggesting that the latest breed of 3.5 disk drives do not have the ability to switch between drive 0 and 1 (or 2 and 3) because most PC's now only ever have one floppy drive so there is no need.

I recently bought two new Mitsumi 1.44MB bare drives (15 pounds + VAT) from a local computer store to fit in as replacements for a pair of old 720K drives which had become very unreliable.

The new drives didn't have an obvious mechanism for switching between 0 and 1 so I tried the PC trick of cutting the cable and twisting the appropriate set of leads, all to no avail as I should have expected (I've seen articles which say it doesn't work in the past).

There was a thin steel plate which was "sprung" into place over the one face of the drives and I decided to remove that to see what was beneath. Lo and behold there were two pairs of tiny connectors at the rear of the drive marked "DS0" and "DS1".

Not a job I should have undertaken with my tinsmith's soldering iron in one hand and magnifying glass in the other (I did say they were tiny) but I managed to unsolder the one connection and gum up the other and it works, I now have a flp1_ and flp2_ which have doubled my disk capacity.

I would recommend anyone who is dubious about soldering to persuade (pay) someone else to do it for them (don't ask me, please - I'm still having nightmares about it) and I don't know whether other drives have the capability but I would be surprised if they don't.

(Super) Gold Card

On the subject of dual disk drives, surely it is possible with the lead from one of the above to cut and twist a couple of connections to achieve the same result?

The Super Gold Card manual shows the connectors with four drive select lines and I would have thought that a bit of surreptitious cutting and swapping of these lines would achieve the desired result.

But beware! I don't have a clue what I'm talking about when it comes to hardware so don't try it unless you know what you are doing.

Dorset Subgroup

In the list of "Clubs" mentioned in the last but one QL World (issue 4 of volume 1) there was no mention of the Quanta Dorset subgroup so I thought I would provide some information:

Quanta Dorset Subgroup
c/o John Mason (Quanta commitee)
or Derek Pope (01202-889070)

Meetings at Merley Social Club
Harrier Drive, Merley, Wimborne,
Dorset, England.

Second Sunday of every month at 2:30. Visitors welcome, all comers pay 1 pound which helps pay for the room and provides tea or coffee and biscuits.

DORIS

My son worked for a while at Poole reference library and offered to put an entry about the group onto "DORIS", the DORset Information System which is run by the county council.

Since the entry went on to the system some three years ago I have had numerous enquiries about the club (mostly from PC users!) and I wonder whether other Counties have similar facilites and whether they are used for publicity by the other subgroups?

DORIS is on display through Prestel terminals in all of the local public libraries but there is also a dial-up facility for anyone who has a Prestel Emulation. The number is 01202-22500 for anyone in the Bournemouth area or 01305-22500 for people at the other end of the County (Dorchester).

Pretty Printing

OK, I can program round it but why isn't there a facility in SuperBasic (not even in SMSQ/E as far as I can see) to specify simple justification (left as normal, centre or right)? A new keyword of JUSTIFY with parameters of (optional) channel number followed by 0 or 1 or 2 would suffice.

The print routine knows where the next character is to be printed and this could be set at end of line, mid screen or right margin for parameter 1 or 2 with a left PAN of that line being done as each character was inserted.

More Printing

There are lots of nice facilities in the SMSQ/E documentation for finding out where you are, which devices you are processing, how big the screen is etc but nothing that I can see to tell me where I will next print to on the screen or whether my display will get scrolled next time round.

Again, OK I can program round it but I'm sure many people would find this facility far more useful than some of the items which are now available. An option to control auto scrolling such as an ability to switch on the CTRL-F5 facility would be useful to many people I'm sure. *[You can POKE the system variable $33 - set it to $FF to enable screen freeze, or tio 0 to disable it - Editor]*

Report

Toolkit 2 gives the ability to "REPORT" to show the last error but the command gives no ability to control the output within a message. A function which returned the text equivalent to a given message code would seem a useful facility.

I was interested to see that Jochen's QMENU includes the FILE_ERROR function which will report a file error and give a return code if it wasn't (or other options depending on the selection). It seems a pity that it's limited to the file error messages becuase that would have been quite useful if it dealt with all of the error numbers. *[FILE_ERROR can also deal with "error pointers, i.e. a pointer to a QDOS string with bit 31 set" - Editor]*

We all know that they are in the ROM or SMSQ/E (where they can be tailored to country code I assume) so what a pity that the poor programmer has to write code to detail the errors himself or leave it to 'REPORT' to put them wherever it sees fit.

QPC and RAM Disks

I've seen an article which suggested that it was counter-productive to allocate too much memory to QPC since it slows down the processing and I wondered whether it would be advantageous (would it be supported) to use the PC RAM disk facility (if it's still supplied) rather than use the Toolkit two or SMSQ/E ram disk if temporary storage is required?

It seems to me that this would make good use of spare memory on those PC's which have plenty and also the PC code running natural would inevitably work faster than that running as an emulated 68000. I've not tried this myself because I only have the demo version of QPC at present and it won't write to anything (that is the only limitation).

QPC Demo

I mentioned this above and for 5 pounds it is good value for money and causes me to consider buying the full version. Assuming that it continues to be offered it is well worth looking at to get a feel for the excellent extensions which are now available in SBasic in SMSQ/E.

[5 Pounds??? You can download it free from

JOCHEN MERZ SOFTWARE

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"QL" on foreign Hardware with SMSQ/E V2.85

It is possible to run the operating system of the QL (or the much better one: SMSQ/E) on nearly every other hardware. The idea is to make SMSQ/E available for most hardware platforms, so that programmers and users can benefit from SMSQ/E's new features.

ATARI Mega STE and TT

QVME - VME bus graphics card which is easily plugged into the VME-slot of the Mega STE or TT. No soldering! Very flexible graphics card which can be programmed to QL MODE 4 resolutions of up to 1280x700 pixels and higher. Especially the TT is turned into a very powerful QL system which makes use of the full hardware of the Mega STE and TT (up to 4 serial ports, PAR port, ACSI and SCSI harddisks etc.).
QVME + SMSQ/E bundled for only DM 599,-

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SMSQ/E can run on all ATARI 520, 1040, ST, STE, Mega STE, TT (but not the Falcon) without any extra hardware required - all you need is SMSQ/E for an ATARI with the extra Monochrome-Screen-Driver.

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QXL2 - the new hardware emulator for PCs. A 68040 processor running at 25 MHz makes sure it is running extremely fast. The card has to be plugged into an ISA slot in your PC. With QL network ports. Provides screen resolutions of up to 800x600 pixels.
QXL2 + SMSQ/E bundled for only DM 769,-
QXL2 without SMSQ/E for only DM 619,-

Software-Emulator for PC

QPC - is ready and works extremely well. See reviews in QL Today (very detailed review in issue 4). **Demo version is available!** More on page 53!

SMSQ/E for existing Systems V2.85

SMSQ/E is the new operating system which allows you to run your QL programs and adds an enormous amount of additional features: faster, flexible disk format, multiple and much faster BASICs, faster screen driver and much more!

For QXL & QXL 2	**DM 199,-**
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ZX8302	DM 14,90
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An ideal time to get things NOW - the £ is worth DM 3,- (!!!) at the time I write this!

QL Applications

QD Editor	**[V9.12]**	**DM 125,00**
QD Upgrade from V8		**DM 24,90**
FiFi II File Finder	**[V4.12]**	**DM 49,90**
FiFi II Upgrade from previous Version		**DM 19,90**
QMAKE	[V4.16]	DM 44,90
QLiberator SuperBASIC Compiler		DM 139,00
QLoad-Ref		DM 49,90
QLQ	[V1.13]	DM 69,90
QMAC Macro Assembler	[V1.01]	DM 69,00
QMENU	**[V7.02]**	**DM 41,90**
QMENU Upgrade		**DM 16,90**
QPAC 1	[V1.05]	DM 61,50
QPAC 2	[V1.38]	DM 119,00
QTYP 2 Spell-Checker	[V2.17]	DM 82,50
QPTR Pointer Toolkit	[V0.29]	DM 89,90
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WINED	[V1.19]	DM 49,90
I/O 2 Toolkit	[V2.16]	DM 99,00
BASIC Linker	**[V1.12]**	**DM 49,90**

Applications

LDUMP	[V1.05]	DM 65,00
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HyperHelp for BASIC		DM 44,90
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QDOS/SMS Reference Manual		DM 84,90
Update sheets from March 1997		**DM 13,00**

ProWesS + Applications

(all ProWesS Applications require ProWesS which is not included!)

ProWesS WindowManager+HTML Reader	DM 129,00
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LineDesign Vektor/DesktopPublishing	DM 79,00
fsearch	DM 49,00
Pflist	DM 49,00
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Postage and package **[Germany]** DM 8,80 (if total value of goods is up to DM 50,- then only DM 5,80). **[Europe]** DM 14,– (if total value of goods is up to DM 50,– then only DM 9,–). **[Overseas]** between DM 14,– (1 item) and DM 35,– (maximum). All prices incl. 15% V.A.T. (can be deducted for orders from non-EEC-countries). E&OE. Cheques in DM, £'s, Eurocheques and Credit Cards accepted.

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most BBS's or get it, for example, from JMS for 3 IRC's (which is less than half!) including postage & packing. - Editor]

The main problem I had with the demo was in getting my PC set up to run it. There are instructions on the disk but the user is left too much to her(his) own devices and I'm sure some people will give up rather than risk ruining their own PC setup.

I would suggest a second 'bootable' disk be provided or an 'install' process which builds a bootable diskette based on the O/S it finds on the user's hard drive. This would get less experienced PC users "up and running" a lot quicker but still leave them the option to build a dual boot option if they wished.

You don't get SMSQ/E documentation with QPC *[not with the demo, but, of course, with the full version! - Editor]* but you can always borrow something to read if you attend QL meetings or workshops. I particularly like the ability to EXecute SBasic programs and pipe output to input between a succession of programs.

The other interesting facilities which I must play with are the HISTORY and PIPE devices. It is now entirely feasible to write a very complex SBasic suite of programs with a main routine which loads in code sections to execute in parallel and interchange status data with other sections. Who needs Java for mutithreading?

This is much easier to control than trying to LRUN or merge other code sections dynamically and should enable SBasic programmers to produce some extensive programs. The WAIT_EVENT and SEND_EVENT facilites should make the intercommunication between co-operating code sections quite straightforward.

SMSQ/E Edit

I was rather surprised (dissapointed?) to see that the EDIT command seems to have been subsumed into ED. Although ED and hot-keys overcome the real need for a single line edit command I have always found EDIT useful for debugging a single line statement which has caused an error.

Equally, the AUTO command in SMSQ/E takes you directly into ED rather than providing a prompt. That seems quite sensible but using AUTO at the start of a SuperBASIC program without line numbers was always a good way to load up a succession of SuperBASIC code segments without having to worry about line number conflicts.

Viruses

There have been a couple of articles recently about the inability of the QL community to suffer from viruses and on the original machines and those extended with Minerva, Trump Card, Gold Card or Super Gold Card it is true because the operating system code is built into ROM and cannot be altered.

However, the same is not true for SMSQ/E which is a "soft" operating system loaded from disk and as such could be modified by intent or by accident to produce unwanted effects. A "virus" is a piece of code which attaches itself to another and modifies it in such a way that code associated with the virus is executed.

Now, I sincerely hope that no-one in the QL world has any desire to produce viruses but it would be as well for software suppliers to start to consider providing a checking utility on their supplied "master" disk, something which the user could run from a "read only" disk to compare the original with a suspect working copy would seem to be the minimum.

Finally

I wrote an article in Quanta some time back in which I grumbled about the lack of an easy interface into the Pointer Enviromnent and the cost of buying enough EasyPtr bits to make it worthwhile.

I've been subjected to a fair number of comments since that article and even been accused of "holding back the development of the QL". I shall respond to those letters in time but I was impressed by Dilwyn's articles on QMENU and bought a copy at the last Bristol workshop.

It's good! It provides almost everything I wanted to be able to do from SuperBasic and I wholeheartedly recommend it for anyone writing SuperBasic programs who wants to build in a modern look and feel.

Note however that QMENU is NOT a set of programs to do things for you, it provides a set of procedures and functions which you call to help you to do things for yourself in your own programs.

As Dilwyn said, the documentation is a bit short on examples but there are a number of sample programs there which any new purchaser would do well to play with and read through with the documentation.

Jochen's documentation says that QMENU is a growing product so a last bunch of quibbles!

a) I tend to use blank lines in my menus to separate options into related groups but QMENU puts selection items against the blanks. You cannot select them (which is reasonable) but it would look better if they were blanked.

[If you use LIST_SELECT, you can insert blank entries or "---------" and make them unavailable - Editor]

b) It is not at all obvious (maybe I'm stupid) which parts of the QMENU software supplied are required and although I managed to work this out I'm sure other people will have similar problems for a while.

[If you have the Pointer Environment loaded, you need to load MENU_rext only. If your system does not "know" the OUTLN command from any extension, load OUTLN_rext as well. That's it!]

c). Again, a paragraph in the manual or an "install" program to build a working disk would be ideal. The issue is complicated by having German and English versions on the disk, (at least Jochen gives us foreigners the choice!) but I'm sure two different routines could be supplied.

[As you have to add it to your BOOT anyway (just MENU on its own does not make a lot of sense, how do we make it automatic? We had various BOOT files printed in QL Today, which shows how different BOOTs are - Editor]

d). I tend to use a one option PAUSE menu to give the user time to review a display before clearing it but it forces a top line display of 'SELECT' if I don't provide a first parameter, I would prefer it to not display the top line; of course, other users would have different views!

[This should not be too difficult - Editor]

■

ProWesS programming : edline power

Joachim Van der Auwera

As you should know by now, ProWesS is a powerful support environment which includes a window manager which can be extended by the user (programmer). This can mainly be done by writing extra types so that different objects can be used in the window. Quite a few types already exist (although many more should be added, I could use some help here).

However, some types also allow their own functionality to be enhanced. One of the best examples of this is the edline type. The edline type allows you to enter a line (or even a fixed number of lines) of text. There are two variants of this type. You either have to indicate the item before you can start typing, or you can always type (even when the pointer is visible). In this last case, you need a mouse to move the pointer. In principle the programmer determines which is the preferred kind of edline, but the user can overwrite this choice and make sure that all edlines are of the same kind.

The edline type normally allows you to enter any text, but this is often not what you want. In many cases, you want to limit the input to only numbers, or only allow strings which conform to certain rules. The edline type allows you to limit and/or extend the normal behaviour. To do this, you have to write some "test" routines. this can be used to limit input to numbers, to allow searches while typing (e.g. limiting input to words from a dictionary, possibly making suggestions along the way) and many other things. The example that I will give here is to input a number using a unit. You can edit the number and change the unit by pressing the first letter. The choice of units is "mm", "cm", "in" or "pt". The unit is displayed as the last two letters. This is for example used in LINEdesign v2.10 when entering distances.

The mechanism which allows all this is quite simple. An edline object can be passed a "test" routine. When the user starts editing in the edline, the "test" routine is called, and then again for each key which is pressed in the object. The "test" routine always gets two parameters, the object descriptor for the edline, and a structure which contains some info about the contents of the edline.

```
  === BEGINNING OF CODE ===
typedef struct {
    int maxlength;  /* buffer length of
                       string */
    char *string;   /* buffer with string */
    int length;     /* length of string */
    int cursor;     /* cursor pos, before
                       string[cursor] */
    char key;       /* key which was pressed
                       */
} EdlineInfo;
=== END OF CODE ===
```

The "test" routine can react in three possible ways :

- Accept the keypress. The function decides that the keypress is valid and should be reacted to in the standard way. You can also change the key to something else (e.g. convert to upper case). In this case, the function should return "PW_EDLINE_TEST_ACCEPT". Only the "key" may be modified in the "EdlineInfo" structure

- Discard the keypress. The function decides that the key which was pressed is not allowed in this edline. This can for example be used to make sure no letters are inserted in a number, or that you can only have one decimal point in a floating point number. The function should return "PW_EDLINE_TEST_NOACCEPT" and should not modify the "EdlineInfo" structure.

- Give a different meaning to the key which was pressed. You can change the string which is displayed and/or the current cursor position. The function should return "PW_EDLINE_TEST_CHANGE". The "EdlineInfo" may be modified (this is intended). However, you should take care that no more than "maxlength" bytes are used in the string (including ending zero), and that "length==strlen(string)".

So let's use this in a real world example. The input is limited to numbers (with sign and dot). You can always change the sign by pressing '-' or '+', independent of the cursor position. Similarly, you can also always change the unit independently of the cursor position. A decimal dot can only be inserted in the string when there is no dot yet (sounds normal).

```
=== BEGINNING OF CODE ===
Error testunit(PWObject object, EdlineInfo *info)
{
    char key=info->key;
    int len;

    if (key=='+' || key=='-')
    {
        if (info->string[0]=='+' || info->string[0]=='-')
        {
            info->string[0]=key;
            return PW_EDLINE_TEST_CHANGE;
        }
        if (info->length+1<info->maxlength)
        {
            MEMCopy(info->maxlength-1,info->string,info->string+1);
            info->string[0]=key;
            info->cursor++;
            return PW_EDLINE_TEST_CHANGE;
        }
        return PW_EDLINE_TEST_NOACCEPT;
    }
    if (key=='.')
    {
        /* only accept if no decimal point yet */
        char *str;
        for (str=info->string ; *str ; str++)
            if (*str=='.') return PW_EDLINE_TEST_NOACCEPT;
        return PW_EDLINE_TEST_ACCEPT;
    }
    len=info->length-2;
    switch(key)
    {
    case 'p':
        info->string[len  ]='p';
        info->string[len+1]='t';
        return PW_EDLINE_TEST_CHANGE;
    case 'm':
        info->string[len  ]='m';
        info->string[len+1]='m';
        return PW_EDLINE_TEST_CHANGE;
    case 'i':
        info->string[len  ]='i';
        info->string[len+1]='n';
        return PW_EDLINE_TEST_CHANGE;
    case 'c':
        info->string[len  ]='c';
```

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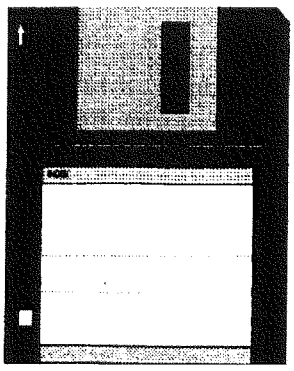

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```
            info->string[len+1]='m';
            return PW_EDLINE_TEST_CHANGE;
        case 0:
            info->cursor-=2;
            if (info->cursor<0) info->cursor=0;
            return PW_EDLINE_TEST_CHANGE;
        case 200: /* right cursor key */
        case (char)0xca : /* ctrl right */
            return (info->cursor>=len) ? PW_EDLINE_TEST_NOACCEPT :
                                         PW_EDLINE_TEST_ACCEPT;
        case (char)0xda : /* ctrl down */
            info->string[0]=info->string[len  ];
            info->string[1]=info->string[len+1];
            info->string[2]='\0';
            info->length=2;
            info->cursor=0;
            return PW_EDLINE_TEST_CHANGE;
        case (char)0xc9 : /* alt right */
            info->cursor=len;
            return PW_EDLINE_TEST_CHANGE;
        case (char)0xcb : /* ctrl alt right */
            info->string[info->cursor  ]=info->string[len  ];
            info->string[info->cursor+1]=info->string[len+1];
            info->string[info->cursor+2]='\0';
            info->length=info->cursor+2;
            return PW_EDLINE_TEST_CHANGE;
        case (char)0xcc : /* shift right */
            info->key=0xc8;
            return info->cursor<len?PW_EDLINE_TEST_ACCEPT:PW_EDLINE_TEST_NOACCEPT;
        case (char)0xce : /* shift ctrl right */
            if (info->cursor<len)
            {
                info->key=0xc8;
                return PW_EDLINE_TEST_ACCEPT;
            }
            else
                return PW_EDLINE_TEST_NOACCEPT;
        default:
            if (isprint(key) && !isdigit(key))
                return PW_EDLINE_TEST_NOACCEPT;
            else
                return PW_EDLINE_TEST_ACCEPT;
        }
}
=== END OF CODE ===
```

Some extra details must be taken into account. When the user enters the edline object, the cursor should not be at the end of the string (which is normally the case), but has to be in front of the unit. Also, the user should not be able to mave the cursor to the unit indicator.

When the user deletes the entire line, the unit should still be displayed. This code does rely on the unit being included when the edline is set, but that should not be a problem. Quite a few other of the cursor movement commands had to be redefined (everything which affects the right of the line). It always makes sure that the last two characters are not affected.

As you can see, extending the edline type for powerful editing is quite straightforward, so use it!

■

Going Dutch

A Visit to the QL Show at Eindhoven Show - April 4th 1997

Alf Kendall

There are many reasons for visiting QL Shows. Some people go just because they are on, others to meet and talk to like minded users. On this occasion I had a special reason for going. At the Hove Quanta workshop I saw QPC running on several notebook computers and shortly afterwards saw an advert for a "last year's model" Texas notebook PC going cheap so I bought it. My next task was to get the Texas working with QPC so, as I do not know my DOS from my Elbow, I enlisted the help of Dave Walker. At first all seemed to go well, but it

then transpired that there was a problem with my Texas notebook.

QPC would start OK from the hard disc BUT as soon as reference was made to win1_ the machine died. Not a good start. Having tried and failed to install Dave's earlier version and even using a copy of his QXL.WIN we had to give up. I checked with Jochen and established that Marcel Kilgus the author of QPC was going to be at the next Eindhoven show. This then was my main reason for going to the show apart from the customary updating of discs.

The show was to be held on the St Joris College site, which is a good venue where the local QL group has organised many successful events. Going to QL shows on the continent need not cost an arm and a leg. With the war going on between the Chunnel and Ferries good offers are often available. Get together with some other QLers and a good time can be had by all. Often QL traders have space in their transport and this is in fact what I did.

As I had travelled over with a couple of traders I arrived early at the hall in time to see the other traders busily laying out their tables. Being taller than the average QL user I was enlisted to plug Jochen in to the power supply! Soon all the usual traders were set up and the customers arrived and business started.

The first thing I did, however, was to hunt out Marcel. Having located him I showed him the problem with my system. He literally scratched his head and soon his fingers were a blur over my keyboard. He loaded a debugger he found out what was causing my problem and set to fixing it. It seems, for some unknown reason, that my computer changes the content of a particular register. The solution was simply to reinstate the contents of the register before QPC is finally installed. This allows QPC to work on my machine and has no effect on other machines as their register is just "refreshed". The whole process took about 20 minutes and after that I had a special version up and running on my machine. I had a quick look around the hall and saw a queue at the JMS stall so I left my pile of discs with him to be updated when time permitted.

I then spent some time setting up my machine as it was after all a workshop! There was still the usual a queue at Jochen's table, so I went on a walkabout. Traders (in no special order) were hard at it! QUBBESoft were busy selling their Aurora boards and other things and talking about their upcoming super-duper Gold card (alias Goldfire). This I found this especially interesting as Nasta (Zeljko Nastasic), who is developing it was in attendance. He had driven up from Croatia with a friend but owing to a mix up with his friend's visa he had been held up at the German frontier and his journey had taken 16 hours. His friend was deported!

Passing Jochen's stand I saw that there was still a queue and my pile of discs had not been touched so I headed for the coffee shop. The coffee/tea pot did not run out all day and real milk was available. This was a real bonus for me because I can't stand the continental equivalent of what is known as evaporated milk in the UK. Having been charged for coffee at UK shows it was a pleasure to have FREE good quality coffee. Off to visit Qbranch who were doing a good trade in all types of Gold Cards, monitors and other software from their portfolio. Next to them PROGS were busy updating LINEdesign and ProWesS. LINEdesign my favourite graphics program is now at version 2.10, but now requires ProWesS to utilise its new facilities. I had my discs updated and moved on.

Back to Jochen, still a queue, but I this time decide to wait, watch and listen.

Jochen was demonstrating QD that is now at version 9. This offers a variety of enhancements requested by users. This is a report on the show and not a plug for any software or software house, but the new wrap-around facility and the use of white paper with black ink looked really excellent.

Still not at the front of the queue so off to see the TF Services desk with its usual interfaces, Minerva and QL bits. Also present was Bill Richardson with his collection of Z88s, leads and monitors. Tucked away in one corner was Keith Mitchell who was demonstrating his Aurora system. Some very pretty pictures were to be seen on the screen and coming out of the attached colour printer. In the middle of the room there was a collection of local Qlers busy talking and demonstrating their handy-work. One even had a little black box!

Back to see Jochen where my discs had got to the front of the queue and were being copied. I looked around and saw that most of the other traders were packing up and the caretakers were collecting chairs and tables. Jochen still had a queue! Management were getting a little vexed, but they know Jochen well, so carried on piling up the chairs and

tables. Eventually Jochen called out "this is the last disc" and I then had the task of pulling the plug on him!

That was the end of the show proper, but some of the traders and visitors then went to the local Chinese Restaurant where the fixed price buffet (eat as much as you can) has become a tradition. Here over the meal technical debates took place. Nasta and Miracle (when Miracle were not going back for another helping!) were talking about their new boards until the fed up Miracle bike set off for the station. I am not technical and most of the discussion was way above my head. What I did gather was that they would be FAST with a capital F and buckets of memory! This was the sign for us to return to the motel.

The show was a success, well attended and organised, and at the end I had QPC up and running on my little Texas.

■

Snippet's Corner - Part 5

M. Knight

To save you (and myself) typing this issue we are dealing with some small routines that were requested by some members of QUANTA who wanted to be able to PEEK and POKE individual bits in a byte. The QL has POKE_L and PEEK_L for longwords, POKE_W and PEEK_W for words, POKE and PEEK for bytes; Turbo Toolkit and various other toolkits add POKE_F and PEEK_F for floating point numbers, now we add Poke_BIT and Peek_BIT% for bits, and some routines for clearing, setting and reading bits in a byte. This allows you to store flags in a very compact format at eight to the byte.

The test listing also requires you to have SuperToolkit II in your system as it uses keywords provided for converting to and from binary notation. As an exercise you may like to replace these with SuperBASIC of your own. The routines use the "Bitwise AND" operator && which treats any values passed to it in raw binary mode. The binary operators often confuse inexperienced programmers but in essence && is very simple. It treats both numbers as a string of bits, returning a string of bits which has only those bits "set" (i.e. equal to one) which are set in both numbers. An example will help.

Given 255 and 64 (e.g. print TestNumber=255 && 64) && will return 64; this is because:

```
255 = %11111111
 64 = %01000000
        ⬇
 64 = %01000000
```

...while given 96 and 223 (print Testnumber=64 && 223) will return 64 because:

```
223 = %11011111
 96 = %01100000
        ⬇
 64 = %01000000
```

These operators are used to ensure that the Clear_BIT% routine clears the specified bit to zero whether it was zero before or not. Set_BIT% sets it to one whatever the previous value and Bit_VALUE% informs you what a particular bit in a byte is at the moment without changing it. Clear_BIT%, Set_BIT% and Bit_VALUE% work on integer variables and will work for 16 or 32 bit values as well as the 8 bit values used here. Bits are numbered from 0 to 7 not 1 to 8, and work from the right column for bit 0 to the left for bit 7. Poke_BIT and Peek_BIT% work only on byte values and will louse up if passed numbers bigger than 7 for the bit number.

```
Poke_BIT Addr,BitNumber,Value
```

...puts Value into the BitNumber of the byte at address Addr; Value should be 0 or 1 only, though it will work with other values as anything other than 0 is treated as 1.

```
PRINT Peek_BIT%(Addr,BitNumber)
```

...will print the bit value of the bit specified in BitNumber from the byte at address Addr in memory. The result is always 1 or 0. The % sign at the end assures Peek_BIT% is an integer FuNction so that Turbo and Q-Liberator produce the fastest code from it.

Listing 5.

```
100 MODE 4
110 WINDOW 504,202,4,23
120 WINDOW#2;504,202,4,23
130 WINDOW#0;504,32,4,224
140 FOR Chan=0 TO 2
150   INK#Chan;7
160   PAPER#Chan;0
```

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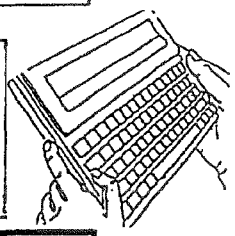

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```
170   BORDER#Chan;1,2
180   CLS#Chan
190 END FOR Chan
200 :
210 PRINT "Set_BIT% demo"
220 FOR Testing=0 TO 7
230   TestByte%=0
240   PRINT "Before=",TestByte%,BIN$(TestByte%,8);
250   TestByte%=Set_BIT%(TestByte%,Testing)
260   PRINT ,"after Set_BIT%(0,";Testing;")=",TestByte%,BIN$(TestByte%,8)
270 END FOR Testing
280 :
290 PRINT \"Clear_BIT% demo"
300 FOR Testing=0 TO 7
310   TestByte%=255
320   PRINT "Before=",TestByte%,BIN$(TestByte%,8);
330   TestByte%=Clear_BIT%(TestByte%,Testing)
340   PRINT ,"after Clear_BIT%(255,";Testing;")=",TestByte%,BIN$(TestByte%,8)
350 END FOR Testing
360 :
30975 DEFine FuNction Bit_VALUE%(Tk_Byte%,Tk_BitNumber%)
30980   RETurn (Tk_Byte% && (2^Tk_BitNumber%)) > 0
30985 END DEFine Bit_VALUE%
30990 :
30995 DEFine FuNction Set_BIT%(Tk_Byte%,Tk_BitNumber%)
31000   IF Bit_VALUE%(Tk_Byte%,Tk_BitNumber%)=1 THEN RETurn Tk_Byte%
31005   RETurn Tk_Byte% + (255 && (2^Tk_BitNumber%))
31010 END DEFine Set_BIT%
31015 :
31020 DEFine FuNction Clear_BIT%(Tk_Byte%,Tk_BitNumber%)
31025   IF Bit_VALUE%(Tk_Byte%,Tk_BitNumber%)=0 THEN RETurn Tk_Byte%
31030   RETurn Tk_Byte% - (Tk_Byte% && (2^Tk_BitNumber%))
31035 END DEFine Clear_BIT%
31040 :
31045 DEFine PROCedure Poke_BIT(Tk_Address,Tk_BitNumber%,Tk_Number%)
31050   IF Tk_Number%=0 THEN
31055     POKE Tk_Address,Clear_BIT%(PEEK(Tk_Address),Tk_BitNumber%)
31060   ELSE
31065     POKE Tk_Address,Set_BIT%(PEEK(Tk_Address),Tk_BitNumber%)
31070   END IF
31075 END DEFine Poke_BIT
31080 :
31085 DEFine FuNction Peek_BIT%(Tk_Address,Tk_BitNumber%)
31090   RETurn Bit_VALUE%(PEEK(Tk_Address),Tk_BitNumber%)
31095 END DEFine Peek_BIT%
31100 :
```

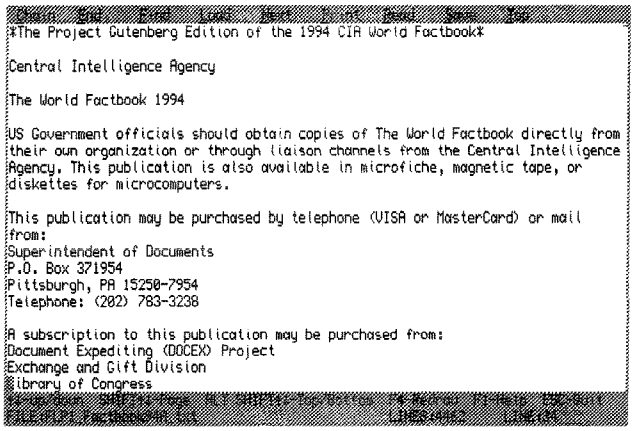
The CIA World Factbook Review

Darren Branagh

A few months ago, via the Disk based magazine CLUB QL INTERNATIONAL, I heard Dilwyn Jones saying he had recently spent some time converting the 1994 updated edition of the CIA World Factbook into plain text "txt" files for the QL. When I heard he had placed these in the public domain, I ordered the complete set from the QUANTA library, though they are also available from Steve Johnson (Disk No. SJS 78, a four disk set, though via QUANTA it is a five disk set).

For those of you that are unfamiliar with this book, it is produced yearly by the Central Intelligence Agency of America, and basically gives many interesting and useful facts on virtually every country in the world - everything from population, languages spoken, total land and sea areas, mountainous regions, location,

main sources of income, curency, wealth, climate, etc. etc. - basically everything a good atlas (costing quite a few quid) will tell you,(and an awful lot more) with the exception of an actual map.



The information contained in the book is quite detailed, and would be difficult to glean this kind of information from any other single source. Among the various contributors are various U.S. bodies, such as the Bureau of Census, the CIA, the Defence Intelligence Agency, Defence Nuclear Agency, Dept. of State, Maritime Administration, National Science Foundation (Polar Information Program), Office of Territorial & International Affairs, US Coast Guard, and many others.

On the QL version, the Factbook (or the Project Gutenberg edition of the 1994 CIA World Factbook, to give it its "proper" name) is divided into varying length text files, in alphabetical order, from "FactBook94A_TxT" to "FactBook94Z_TxT", which will load into virtually any word-processor or Text viewer. Therefore to view the data for a given country, e.g. Ireland, you would simply load the file "FactBook94I_TxT" into the QL, as all the countries beginning with "I" are held in this file.

Searching is extremely easy thanks to a very simple indexing system contained in the text files. As the first few words of the first file says:

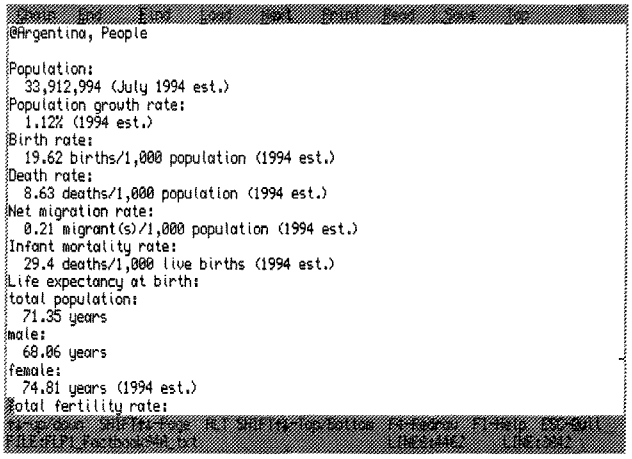
"To search for information on a given country, search for @country, use @Afghanistan, for example. Or, you can search directly for one of the catagories of that country as follows:

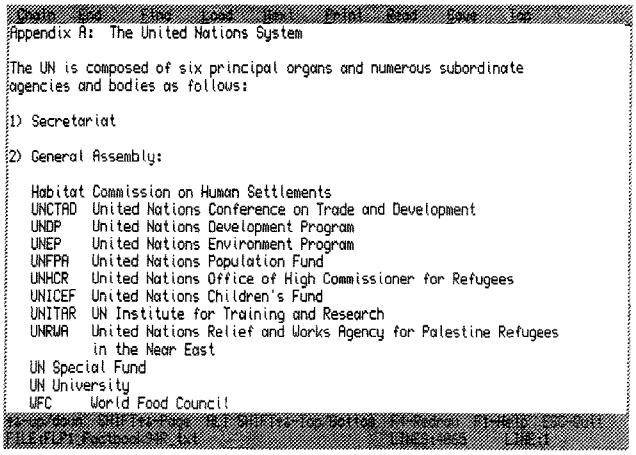
@Afghanistan, Geography
@Afghanistan, People
@Afghanistan, Government
@Afghanistan, Economy
@Afghanistan, Communications
@Afghanistan, Defence Forces

This simple way of using the @ symbol makes searching fast and extremely accurate. I use this regularly using the search forward and backward features in PERFECTION.

For example, searching for something on the Afghanistan Defence forces using @Afghanistan, Defence Forces, gives us the following excerpt:

"The military does not yet exist on a national scale, Some elements of the former Army, Air and Air Defence Forces, National Guard, Border Guard Forces, National Police Force (Sarandoi), and tribal militias remain intact but are factionalized among the various mujahedin and former regime leaders. Manpower Availability: males age 15-49: 188,036; fit of Military service 2,245,196; reach military age (22) annually: 158,047 (1994 est.) The new government has not yet developed a defence budget."





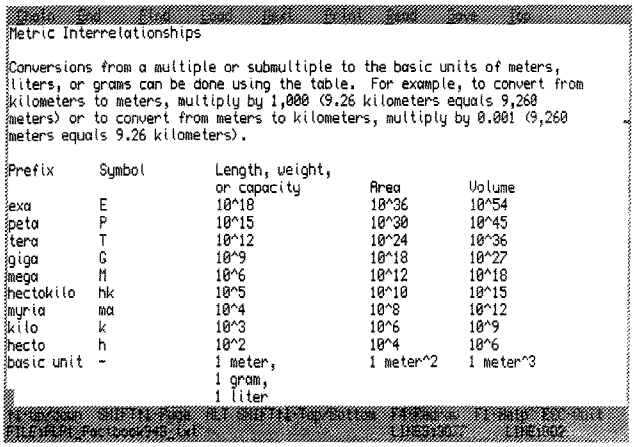
This is just a small example of the information contained in the book - remember, there are five 720K disks!

In the first file (called "FactBook94A_TxT"), there is a complete A to Z list of all the available countries, with the information being split into the headings outlined above.

As I have a interest in Geography, I have found the book to be quite useful, and very well put

together - the sort of thing you'd expect from the CIA. I believe it would also be of great use to any students out there - to help with Geography, History, and Economics. It may also interest the frequent Traveller, as a travel guide.

Also, various addresss are given in the text, to write to or contact for further information, or to


Metric Interrelationships

Conversions from a multiple or submultiple to the basic units of meters, liters, or grams can be done using the table. For example, to convert from kilometers to meters, multiply by 1,000 (9.26 kilometers equals 9,260 meters) or to convert from meters to kilometers, multiply by 0.001 (9,260 meters equals 9.26 kilometers).

Prefix	Symbol	Length, weight, or capacity	Area	Volume
exa	E	10^18	10^36	10^54
peta	P	10^15	10^30	10^45
tera	T	10^12	10^24	10^36
giga	G	10^9	10^18	10^27
mega	M	10^6	10^12	10^18
hectokilo	hk	10^5	10^10	10^15
myria	ma	10^4	10^8	10^12
kilo	k	10^3	10^6	10^9
hecto	h	10^2	10^4	10^6
basic unit	-	1 meter, 1 gram, 1 liter	1 meter^2	1 meter^3

give some further insight yourself.

The book is available from the CIA each year, "either via plain paper copy, microfiche, magnetic tape, or diskettes for microcomputers" to quote the book - though I somehow think we'll be waiting on Dilwyn for the next QL update!!

[I have not yet come across a later edition, unfortunately. If anyone can obtain a more recent version (hints on how to purchase it in one of the text files on disk 1), I would gladly try to convert it - Dilwyn Jones]

■

Response to Z88 Source Book Review

Timothy Swenson

I was pleasantly surprised to see a review of the "Z88 Source Book" in the last issue. Although the Z88 is a bit off topic, most Z88 owners I know are also QL owners and the two computers go well together.

It also found it interesting to be known only as the "Author." I don't know if that particular electronic copy of the book has my name on it or not. I do not know if the it was the first or third edition of the book was reviewed (the second edition was a change only for the hard copy edition). The first edition is about 40K and the third is about 100K.

As for the utilites that came with the book, most had been culled from the Internet and some I wrote myself. I have sent all of the utilities, plus the third edition of the book, to SJPD. He should have it by the time this issue comes out.

Now for some background on the Source Book. The first edition of the book came out in 1993. Frank Davis of FWD Computing (formerly Mechanical Affinity) published the hard copy edition of the book. The electronic copy was distributed via my web page and other Z88 web pages. After the book was out for a year or so, I decided to add some more stuff that I had come across and to add more material on the various uses of the Z88. The third edition came out in early 1996. The first edition was mostly a collection of information from a variety of sources. The third edition had a little more original content.

Even though there is a commercial hard copy version of the book (it is formatted and looks better than just pure ASCII), the electronic copy is freeware and may be freely distributed.

■

Letter-Box

Steven Boyer writes:

I want to be able to use my Archive names/address/telephone database on my wife's PC. I have the excellent Discover file conversion software, but I was just wondering if the data needs to be in ASCII, W.P.or any other particular format. I haven't devoted any time to this task yet, I just presumed that dozens of people have been down this road already and would be willing to share the experience. Great magazine, QL Today. If anyone can help me, please contact me on:

Tel: 01422-250050
Fax: 01422-381921
Email: *STEVE_THE_KITCHEN_FITTER@msn.com*

P.S. Note the underscores in the email address, not dashes - sorry, but I can't let go of my qdos roots!

Dilwyn Jones replies:

That's what I like to hear, someone who won't let go of his QDOS roots, and who likes to read QL Today. You did not specify if the data is to be sent to a word processing or a database program on the PC, but since many PC word processors can accept tabulated data from databases, this distinction is less clear than it used

to be. Many PC databases will accept comma-delimited exported data, which is fairly similar in format to an Archive EXPORT file, although you may have to load the exported Archive file into an editor to alter the following file format specific information:

1. The first line, containing the field names and type information
2. The separators between the data elements on each line (commas on the QL, some programs may require semi-colons for example)
3. The quote marks surrounding string data in the lines of the export file.

The data is likely to have to be in plain text or export format. If what you want to do is to take the data into a word processor for formatted printing, it may be better to use the export-to-quill option of the Archive export command, see the Archive manual for details.

Aurora Monitors

Ian Pizer, Switzerland, asks:

Just got QL Today, lots to read and study, great, I see you had already used my "Cleaner" contribution. I also saw some remarks about monitors so here is a question about AURORA. It seems to be very flexible re monitors but I have heard that some monitors do not work with AURORA. Do you know what characteristic one must avoid?

Nasta (Zeljko Nastasic, designer of the Aurora), replies:

Buy the best you can afford if you intend to spend any appreciable amount of time in front of it. Any VGA or SVGA monitor will work perfectly fine up to 1024x512, and the user would be well advised to choose it by the amount of time he/she can spend in front of it without getting a headache or eye trouble. It is probably a good idea to spend some time in front of one in a shop and then decide. If it's running windows, set it to 800x600 at least, or 1024x768. If you can read the icon fonts even when the icons are at the corners of the screen, and if you like the price and trust the manufacturer, then buy it - especially if all these are true after half an hour of looking into it and thinking about the price too! For 1024x768 a 15" monitor (at least) is almost a must. I have to say that I haven't really looked at monitors lately because I have my bases covered in that respect! I have

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long ago decided to buy the best I can afford, and that for me implies something with a Trinitron tube, preferably from Sony. I'm sorry if this sounds like a commercial, but I spend a lot staring at the screen and like my eyes too much. I've been through a dozen monitors before the current selection, and the current ones I found best agree with me. I use a Sony Multiscan 15sf with my Aurora, and I find it very good. On occasion I've hooked it to a 17" monitor from the same manufacturer, and that is excellent, but far too expensive for me. Otherwise, any monitor which is capable of using 48kHz for horizontal synch will work at 1024x768, without interlace. Also, it will display all the other resolutions with the highest possible refresh rates to boot.

Ron Dunnett, Qubesoft P/D, replies:

We are only aware of one SVGA monitor that doesn't work with Aurora, this is made by NEC, model number 4F, owned by Roy Wood of QBranch. We haven't as yet had the opportunity to investigate the problem. Aurora is very flexible regarding what Monitor is attached to it. We expected that Aurora would not be compatible with every single Monitor available on the Market so we are very pleased, so far, that only one Monitor has been found that doesn't work with Aurora. There is very little else I can say regarding Monitors, it would be very handy, not only from my point of view but also from other potential Aurora users in general, if those current Aurora Users would put their experiences in writing regarding Monitor usage.

Dilwyn Jones replies:

Since Ron asks for Aurora users' experiences, here are mine. I have used two monitors with my Aurora system with success. The first is an M144PNL manufactured by S.A.M. GmbH, sold by Bytewise Technology Ltd in the U.K. under the name 'Jet Black Systems'. This monitor is black, to suit QL systems, and almost works fine up to 1024x768 (although you lose a little bit at each corner, the picture size adjustments just about fail to bring in 100% of the picture). The display is quite readable at small font sizes (up to 1024x512) for a 14 inch monitor. The only snag I found was that the swivel base has monitor mounting lugs or tabs which might break easily. The other monitor I use occasionally is a Samsung Syncmaster 3Ne, model CQB4147L, a 14 inch monitor normally used with my PC. I could not get this to co-operate at 1024x768, but seemed fine at 800x600 and 1024x512, although the display is not quite as good as the Jet Black unit described above when displaying small text, for example.

Ian Pizer responds:

Thanks for the monitor info. I was seduced into buying a Sony 17 inch multiscan 200SF for use with my Aurora, which is great after a 14" QL thing. There is a little distortion at top edges and the first 2 top pixels along the top are dicy but not a real problem - still experimenting.

T. W. Roussel in Vale, Guernsey writes:

Some time ago I purchased a QXL card and installed it in a PC with a 386 processor. I used it as such for a while with a small part of the screen area and no mouse. I then purchased Genealogist 3 and tried to install the mouse (which was working on Windows 3.1) and improve the screen. The mouse did not work and the screen problem was only partly resolved, so I intended writing to try to clear the matter up.

However, due to a change in my work I purchased a new PC with a 486 processor and Windows 95 *[Oh dear! - Editor]*. After a brief but unsuccessful attempt to install the QXL card in the new computer I abandoned the idea and put it back in the old machine.

Since then I have spent much time learning how to use the new software, transferring old hand written records to the Works database and feeding my colleagues with a wealth of new information.

Now I would like to go back to the old machine to sort out the screen and mouse problems and access my old genealogy records properly. I believe that I have all the appropriate software on the hard disk but it does not seem to function.

I would also like to obtain a suitable version of exchange and could probably do with advice on other software that I might find useful. In fact I am confused by the programs that I have loaded and should perhaps clear some of those out.

Can anyone please give me advice on these problems. I really do not fancy transferring all my genealogy records and associated correspondence to my PC.

Chris Boutal replies concerning Genealogist:

Genealogist 3 can be run with different sizes of screen on the QXL by using a parameter on the command line. There are examples in the BOOT file of the "normal sizes". The format of the command is

```
EX 'FLP1_G3_OBJ';'600x350'
```

to give a window 600 wide by 350 tall. Without a parameter it defaults to the QL size (512x256). It doesn't automatically fill the window as, to my mind, you might not always want it to!

As to the mouse, I know of no specific problem with Genealogist 3, I do recall that PCs with serial mice had problems with certain drivers when used with QXL. I have an irritation on my own system that the mouse works fine on the QXL if I start up the QXL from DOS, but if I start it from Windows, the pointer moves around the screen much too quickly. No amount of fiddling with its setup has cured this.

Jochen Merz replies:

The COM port to which the mouse is connected has to be configured to "none". If it is not turned off for SMSQ, then SMSQ will use it as a serial port and will not take care of any incoming mouse data. On some systems, some fiddling with the DOS mouse driver and the mouse settings in QPAC 2's SYSDEF menu may be required. I suggest you set the mouse in QPAC 2's SYSDEF to the minimum values and adjust the DOS driver. As soon as it behaves better, you can fine-tune the QPAC 2 setting.

The display size used by the QXL (and also SMSQ/E) seems to cause some trouble. I will explain it in detail again:

512x256 is a resolution which does not exist on PCs. The closest resolution which would allow to emulate this is 640x350. Clearly, 512 is 80% of 640! Also, 256 is nearly 75% of 350. Scaling the 512x256 up to 640x350 would not only be very, very time-consuming, but would also lead to every 4th pixel being two pixels wide, which would give a bad looking picture. What is unclear about this explanation? 512x256 is 131072 pixels - 640x350 is 224000 pixels. This means, that 512x256 fills about 60% of the closest matching resolution. The higher the total resolution is, the smaller portion occupy 512x256 (which always remain 512x256!!!). If you wish to change the size of BASIC windows, use the WINDOW command!

In SMSQ/E (not SMSQ!!!), you can change the display size while the system is running, i.e.

```
DISP_SIZE 800,600 sets it to 800x600.
DISP_SIZE 640,480 sets it to 640x480.
```

In SMSQ, you need to configure the file to select the desired resolution.

Jonathan Hudson writes:

In his QTPI article, Graham Buck, notes that he cannot get the "Apres Dial" facility to work. As far as I can tell, this does work, and has always done so; unfortunately, the manual omits exactly how to make it work, though dedicated follows of the QeM/QTPI saga (or those with elephantine memories) would have found the answer in the QeM manual.

The "Apres Dial" string is a replacement for '[' (open square bracket) in a phone number; and, name not withstanding, may occur anywhere in a phone number.

For example:

In the phone book 4th Dimension BBS :

```
[1202 770515
Apres Dial = 00-44-
```

Would dial `00-44-1202-770515`

and with

```
Apres Dial = 0
```

Would dial `01202-770515`

Which may be considered more convenient than having two distinct phone books or entries.

As Joachim van der Auwera noted in QUANTA some time ago (in relation to the demo Linedesign fonts), why can users who notice such things not be bothered to inform the authors? All it would take is a two line email, fax, letter or 30 second phone call. With such apathy apparently widespread, it is hardly surprising that the QDOS scene appears stagnant.

Comment from Jochen Merz:

I would like to add something to Jonathan's comment: I think that matters have improved. The majority of users seem to have discovered that approaching the author of a program is probably the best and fastest way to get things sorted out. Most users know by now (or should know) that most QDOS authors (like Jonathan) not only fix reported bugs or explain "challenges" (funny note: a number of companies in the PC world seem to replace the words "problems" or "bugs" by "challenges"...) but also add features, wishes from users etc. A number of customers were very helpful in highlighting bugs in QSpread and explaining how to reproduce them so that we were able to fix them. Wolfgang Lenerz, author of FiFi, Wined, BASIC Linker etc. also responds very, very quickly to user requests and bug reports. It seems that the kind users who reported bugs to, for example, other Mausnetz-Users, has learned that there is not necessarily a magic way of transmission from the Mausnetz to software authors who do not subscribe to it.

■

Replace

Dilwyn Jones

This routine shows to do multiple search and replace operations on strings in SuperBASIC. It has quite a lot of REMarks in it, so it should be easy for you to see how it works. It is implemented as a string function called REPLACE$, and is called by a line like this:

```
LET    newstring$=REPLACE$(oldstring$,
lookfor$,replacewith$)
```

"oldstring$" is a string variable where you wish to replace something. "lookfor$" is another string variable containing text you want to be replaced by something else. "replacewith$" is the new text to take the place of the old text.

For example, if we use this command:

```
PRINT REPLACE$('QL Today','QL','QXL')
```

the phrase 'QL Today' is changed to 'QXL Today'.

The routine copes with all the cases I could think of. You may have some fun trying to break it, and then trying to improve it to remove any bugs!

```
1000 DEFine FuNction REPLACE$(text$,search$,replac$)
1010   LOCal newtext$,searchstart%,offset%,textlen%,searchlen%,look_for,replacelen%
1020   newtext$     = ''            : REMark this will be returned string
1030   searchstart% = 1             : REMark start of current search
1040   offset%      = 1             : REMark distance across search$
1050   textlen%     = LEN(text$)    : REMark length of original string
1060   searchlen%   = LEN(search$)  : REMark length of search$ (replace this...
1070   replacelen%  = LEN(replac$) : REMark length of replace$ ...with this)
1080   IF search$ <> '' THEN
1090     REPeat look_for
1100       :
1110       REMark no point looking too far into the string, search$ wouldn't fit!
1120       IF searchstart% > (textlen%-searchlen%+1) : EXIT look_for
1130       :
1140       IF text$(searchstart%+offset%-1) == search$(offset%) THEN
1150         :
1160         REMark one element of search$ matched
1170         offset% = offset% + 1
1180         IF offset% > searchlen% THEN
1190           REMark all of search$ has been matched
1200           newtext$ = newtext$ & replac$
1210           searchstart% = searchstart% + searchlen% : offset% = 1
1220         END IF
1230       ELSE
1240         REMark failure to match search$, so copy original text
1250         REMark to new string and reset search pointers
1260         newtext$ = newtext$ & text$(searchstart%)
1270         searchstart% = searchstart% + 1 : offset% = 1
1280       END IF
1290     END REPeat look_for
1300   END IF
1310   :
1320   REMark do characters at end of line
1330   REPeat look_for
1340     IF searchstart% > textlen% THEN EXIT look_for
1350     newtext$ = newtext$ & text$(searchstart%)
1360     searchstart% = searchstart% + 1
1370   END REPeat look_for
1380   :
1390   RETurn newtext$ : REMark the 'replaced' version of the string
1400   :
1410 END DEFine REPLACE$
```

■

New Master Spy

Dominic Lester

The latest version of Master Spy embraces the larger screens available for the QL these days. It is also more user friendly, providing a very clear main menu in addition to the many short cut keys.

A good feature of both Spy and Master_Spy is that when a user is new to the program it seems safer to use the F3 menu, which lists all the features, but as soon as confidence sets in the sequence of key-presses is reduced to using CTRL and the remembered key, by-passing the F3 menu.

Although I have tried 'SVGA' and 'VGA' (dare I use PC terms) sized screens my dedicated QXL only has an 'EGA' monitor which I find to be a very comfortable size. Fourteen inch monitors with SVGA have very SMALL letters in mode four!

On EXecuting Master_spy it automatically takes over the whole screen, without any need for configuration. This is also the case even if it is run without the pointer environment active. Having dominated the screen completely it is simple to re-size and re-position as desired, allowing 'buttons' or clocks to be uncovered, for example. In this way it is possible to view two (+!) files side by side (vertically), providing neither overlap too much, and edit one or the other using CTRL up or down: keeping an eye on both the status bars to remind you prior to saving etc. I can see that perverse users with seventeen inch monitors could use SVGA mode to view four or more files side by side! Three, together, would exceed most QL screen's usability.

In general, Master_spy has less commands than Quill or Perfection, but does include all the commands I use on a regular basis. It is an ideal editor for developing programs due to its size (under 24k when Smashed) and the fact that no toolkit or sub-program needs be present to run.

Speed of use is a strong point. Nearly every response is instantaneous. As with most programs I would recommend the Lightning screen extension to anyone using a regular QL (as I am now). The scroll speed does not seem to have suffered from the change to scrolling all lines and loosing the 'lazy screen' feature (an odd, but endearing feature of the regular Spy that updates the area near the cursor before the rest of the screen, presumably useful for very fast typists!).

Nice little touches like the full status line give a permanent indication of the file you are viewing, whether it has been altered, insert or over-write mode, line and column (current and totals), the actual offset from first character (useful for machine code poking etc.), hard or soft line status (this is an odd feature which allows lines to be near endless) and finally the ASCII code of the character the cursor is upon (very handy printer and PC codes etc.). A caps lock indication is provided which is handy for standard users who use the original keyboard.

Many files or many 'views' of the same file can be open at the same time. This allows fast viewing of different 'places' with one (CTRL+UP etc.). If too many different views are running then the Kernel menu will list what is active, plus less useful information (to me anyway). To clear any unwanted 'screens' CTRL Z(ap) does the trick.

The block menu can be used to move any specified section from or to any other. Destinations can be: files (write), printers (write), same file (copy) or another Spy file (put) via a stack which is available to all open screens. This powerful command usually requires the user to be in the normal insert mode (not over-write for some reason).

Each time a new file is READ (or added as a parameter after the line: EX Master_Spy; filename) the user is asked to confirm the workspace likely to be needed. This does seem cumbersome but I have only ever pressed enter at this point; which just precedes normal editing.

There is a MOVE menu with a choice of five options, including the usual TOP and BOTTOM. It is also possible to go directly to either a specific LINE, MARK or OFFSET. The SET menu creates a MARK, can set the PRIORITY of this editor, can change the STATUS bar's length and sets the number of TAB characters required. Also SET COLUMNS will prove very handy when writing a letter that is going to a non A4 piece of paper.

Searching is easy: either UP or DOWN any file. This can be superseded by EXCHANGE which can also be repeated (CTRL F2). Do you remember the replacing the MDVs in tons of files? If an alien format text file needs to be sorted then the TOOLS menu has a STRIP option that will crop any characters within your given code range. Not as automatic as TextTidy, but more

selective. In TOOLS only press HEX if assembler programming is how you think, because the screen permanently stays in hexadecimal! The TOOLS menu also provides a wordcount and checksum.

Configuration is done manually in this program. Fortunately few will need to alter anything, but if you do: this is done by poking (CTRL P) after moving to the appropriate offset (CTRL MOVE OFFSET) given in the provided parameter sheet.

Overall I use this program more than any other. A line by line COPY and paste being the only wish (CTRL L does line CUT and paste only).

■

Archive made easy

Graham D. Lutz

This package by Bill Cable attempts to take the mystery out of the Archive programming language. It arrives as a spiral bound manual (some 80+ pages long) along with a disk, which contains most of the programs from the manual plus some other goodies from the same author previously published in IQLR. It can be obtained from Qbranch priced at £20.

The Manual

The manual is actually made up of parts 1 to 25 of an Archive series previously published in UPDATE magazine. As suggested by the author, the manual is not a replacement for the original Archive literature, although a decent explanation of most of Archives features can be found within it, along with examples. To get the most from it, I would suggest reading it along with the Sinclair original.

The first section of the manual uses examples of programming Archive from the command line, using simple commands to create and examine database files. This I felt was a good way to introduce a beginner to the language. More advanced users are catered for later on, with full examples of fully working programs, including a Form Editor and Printer for Archive databases. These two programs are quite large, and the listings cover several pages, fortunately they are included on the accompanying disk.

Apart from the examples there are some other interesting sections, covering such diverse issues as error trapping, backup strategies, a comparison between Archive and SQL (Structured Query Language) and even an Archive program to solve the Towers of Hanoi puzzle. The last is particularly interesting, as it uses a technique for getting round Archive's lack of array structures.

There are a few things I didn't like about the manual, the main one being that the author uses an odd way to represent an example filename, using two braces could be confusing for a beginner, it may have been better to suggest actual names. The other slight disappointment was in the section covering Sedit (the Archive screen editor), the originally undocumented extended screen commands are only briefly covered, and the ones that are explained, are the few that the author found useful.

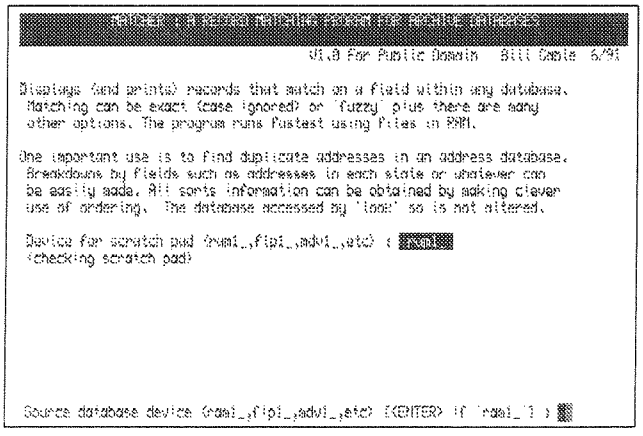
Overall then, a useful and interesting manual with plenty of tips and examples. An ideal complement to the Sinclair original manual, but not a replacement for it.

The Disk

The disk includes most of the programmes from the manual, which is a useful idea, as it would take hours to type them into the Archive editor by hand. Also included are some other useful programmes along with documentation, which were previously published in IQLR.

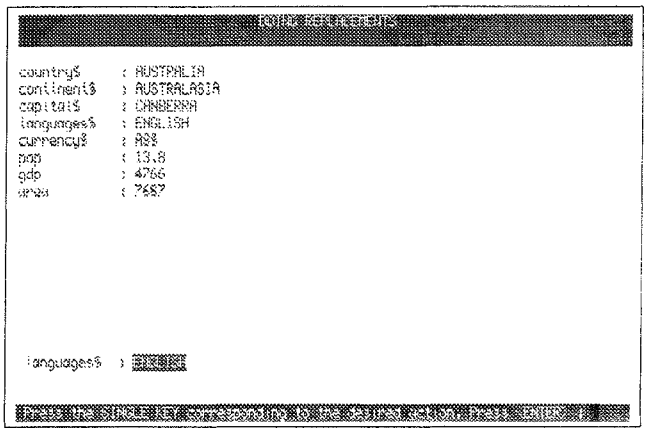
Matcher

This useful utility searches your database for duplicate records. Unlike most matching programs, their is a 'fuzzy' option which tries to cater for misspellings or wrong punctuation. A genuinely useful program.



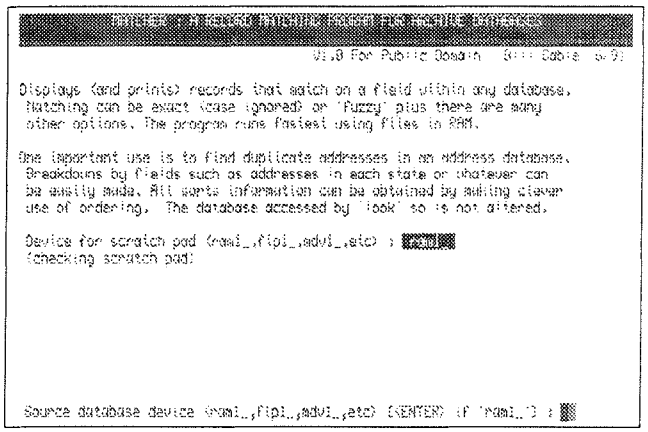
Replace

Another nice utility which allows you to do a search and replace on selected fields of your chosen database. I used this several times during the review, its easy to use and works well.



Windex

This is actually a suite of programs. It is used to create a word index for a book or manual or used to study word usage. The first program of the suite is a useful basic program which turns any plain (ASCII) text file into Export format and can then be imported into Archive. From Archive the index can then be built in several ways.



All these programs are accompanied with a Quill _doc file containing instructions for use.

These programs although useful to beginners using Archive, will also, I'm sure be appreciated by the more experienced users. I would even say that Archive Made Easy is worth obtaining for these programs alone.

■

Accelerating Abacus

Peter Hale

ABACUS has grown old gracefully, perhaps moreso than any of the PSION suite. With a Gold/QXL Card it can run a humongous spreadsheet at acceptable speed. Although it lacks the bells and whistles of the likes of 1-2-3, there is little computation beyond its ability. And it will accurately add two plus two.

It is popular for everything from tracking investments to budgeting and from comparison shopping to creating invoices. At its simplest use, it surpasses Quill for creating multiple columns of text.

The QL literature on using ABACUS has been quite limited, mostly because one either understands its potential and how to achieve a goal, or one does not even know where to begin asking questions.

Long-time users of ABACUS have experienced two of its cranky weaknesses - the tendency of a favorite spreadsheet to crawl with age and a related potential to hangup in mid-calculation, usually after a three hour session of entering data.

Such weaknessess can be avoided, and even corrected.

There are three (3) features of spreadsheet development critical to smooth operation and all relate to the manner in which ABACUS stores its formulae.

Feature 1

The first is that ABACUS creates a list of formulae in the order that they are created. Next time you load a spreadsheet, F3, Print, Formula for an illustration.

In all likelihood the index of formulae printed at the end (all beginning with F) has many gaps in the sequence. The gaps represent formulae that were Rubbedout or Amended.

What isn't evident is that during a calculation ABACUS checks all the missing formulae as well as the ones that are operational. Thus the more blanks the slower the spreadsheet. A spreadsheet with forty formulae numbered F1 to F40 runs faster than one with forty formulae with the last number F350. A high formula number is the symptom of inevitable tinkering with a favorite spreadsheet.

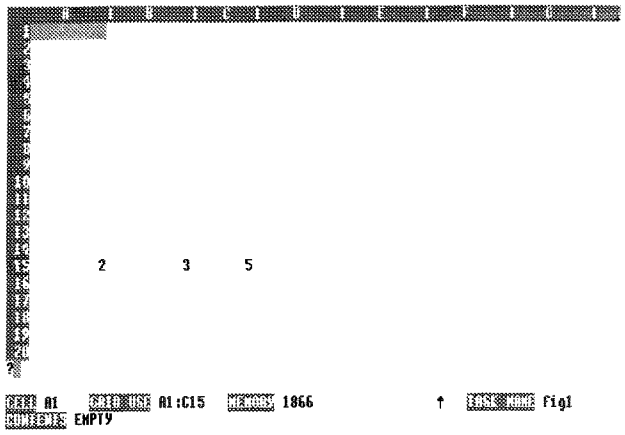
Feature 2

The key to avoiding formula creep is the second feature - the use of Copy and Echo commands whereever possible to insert a formula.

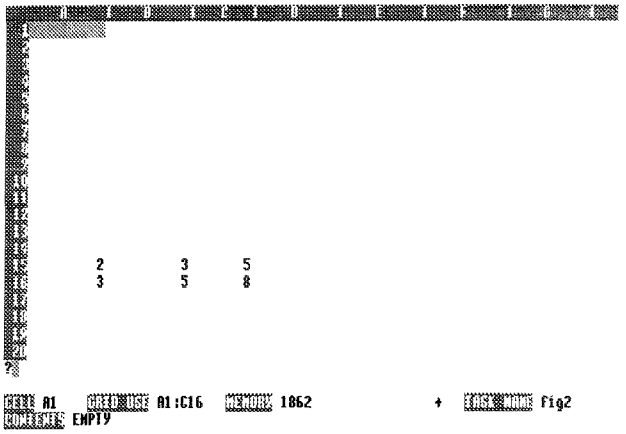
Careful use of Copy and Echo keeps file length compact resulting in faster saves and loads and quicker recalculation. (More on Copy and Echo at the end.)

For example the formula A15+B15 in cell C15 takes 33 bytes, as does every additional sum of

two cells individually entered.



However, if the formula in cell C15 is Copied or Echoed to cell C16 (becoming A16+B16), the file length is only 16 bytes greater.

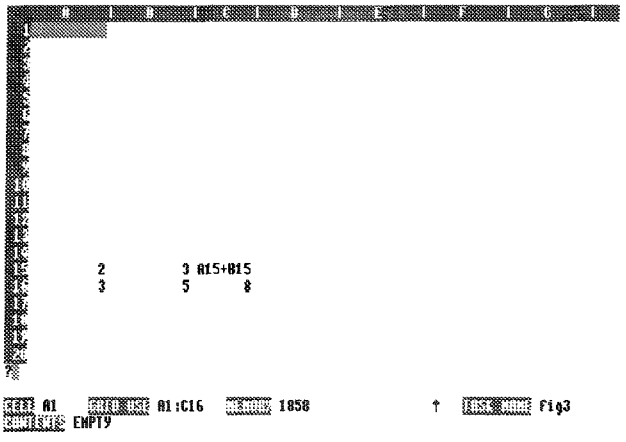


It may be useful to keep a handwritten crib sheet of cells where formulae to be copied are stored. Alternatively, create a table of formulae outside the work area, then copy the relevant formula as needed. Note that there is no memory or formula penalty for inaccurately Copy/Echoing a formula.

A table also verifies the accuracy of the formulae. Amending a formula in one instance alters all copies throughout the spreadsheet.

Feature 3

The third feature of ABACUS answers the question of "When is a formula not a formula?" Answer: When it is a text string as in the contents of cell C15: "A15+B15".



Fortuitously, changing an occurance of a formula into a text string changes only that occurance, not all other copies.

Thus it is an elegant approach to build on an existing formula by wrapping it in quotes, amending it, then stripping the quotes. The new formula is added to the queue.

Bringing it together

Care in building a spreadsheet is the best way to achieve smooth operation but few of us are so gifted as to key in every formula correctly the first time (or why pencils have erasers – rubbers in English-speak).

So what to do with a much tinkered spreadsheet that gets cranky and arthritic as the formula numbers head toward four digits?

Ultimately there are two objectives: Minimize the number of unique formulae and reset the formula numbers toward the low end. However, because of the first feature it is impossible to reset the formula numbers in an existing spreadsheet.

One approach to achieving the second objective is to multi-task two copies of ABACUS, then rekey the whole spreadsheet relying on task-switching to check old against new. It is possible but prone to Murphy's Law and the manifestation of some pathologically interesting emotions in the keypuncher.

A better choice

Alternatively, the three features can all be brought to bear as follows.

The strategy is to export the spreadsheet as a pure ASCII file, then re-import it to a blank, pre-Zapped spreadsheet. This strategy is necessary since formulae are lost in the export process. Only the results of formula calculations are exported.

First, expand the table of formulae created off the work area to include one occurance of each formula. The Window command (F3, Windows) can be very helpful. Set the windows to move separately, and keep the table of formulae visible for reference. (Switch the cursor between windows with the F4 key).

In the work area change each occurance of a formula to a text string of the cell

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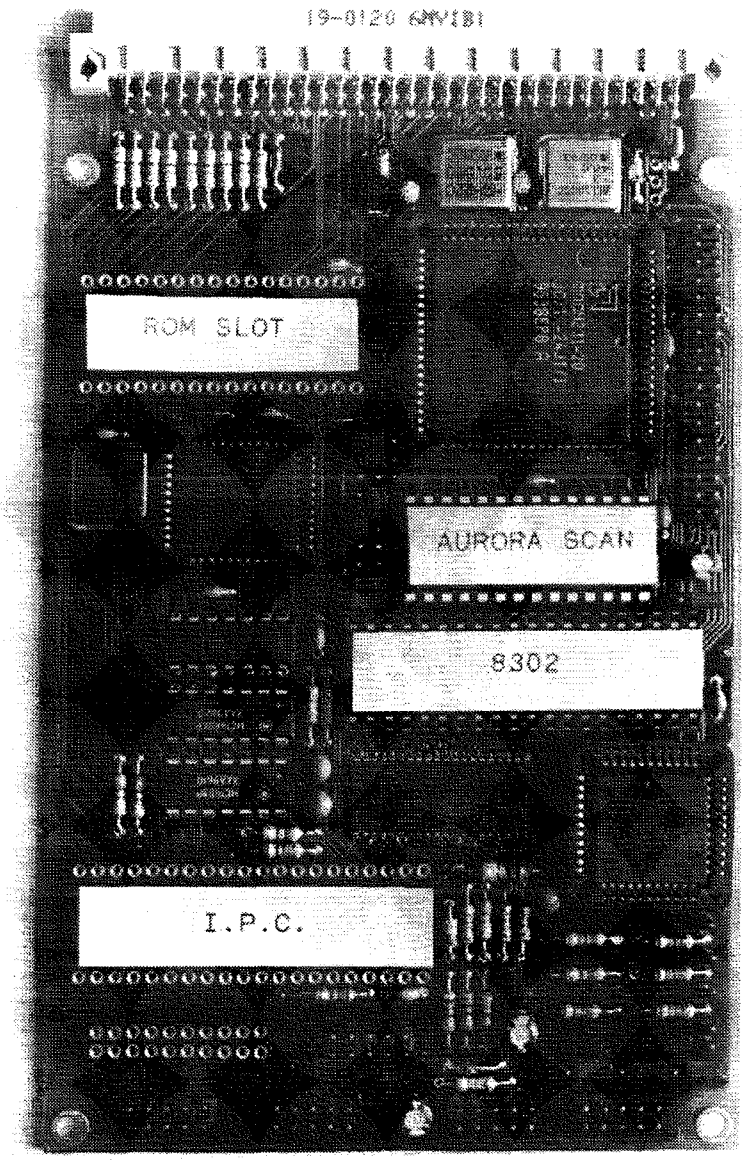

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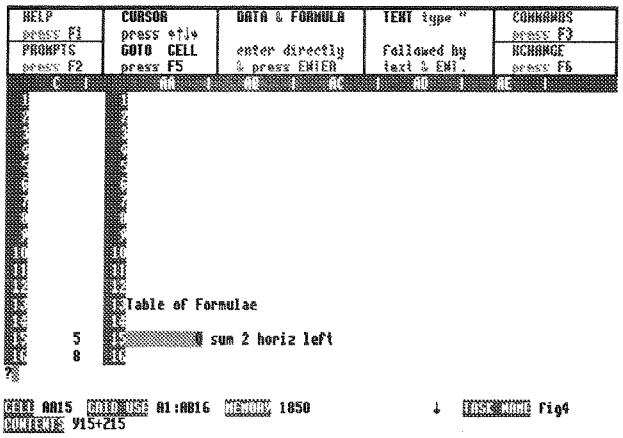
where it is kept in the table. Thus if the formula A15+B15 in cell C15 is copied to cell AA15 in the table, it will read as Y15+Z15 (the sum of horizontally adjacent cells).

Whenever the formula for the sum of horizontally adjacent cells is found in the spreadsheet, replace it by the text string "AA15". When this part of the exercise is finished, the only formula will be in the table.



At this point ensure that there are no blank columns or rows between the work area and the table of formulae, then wrap those formulae in quotes.

The next step is to insert two rows at the top of the spreadsheet with the F3, Grid, Insert, at 1, Rows 2 command.

In the top row enter as a column heading a field name as a text string. The letter of the column will serve nicely. Since column width data are lost in export, the width of the column may also be included in the column field name. If column A is 12 characters wide, the field name might be "A12".

Next, ensure that each cell in the second row has a text string. For simplicity, enter "X" in cell A2 and Echo it the length of the row. This step ensures that all entries in the column will be exported as text. Any data will be wrapped in quotes during export, so that 123.45 becomes "123.45".

The spreadsheet is now ready to export. But save this version in case there are any errors.

Export this to a file called "file" (Files, Export to archive, ‹ENTER›, by columns to flp2_file).

Wow, some achievement! Rest now to prepare for the resurrection of the spreadsheet like Phoenix from its ashes.

Importing and Restoring the Spreadsheet

Start with a fresh, blank spreadsheet. Either Zap the old spreadsheet or for real safety, reset the QL and re-execute ABACUS.

Import (F3, Files, import, from flp2_file, by columns to cell A1. If there is a problem with the export file, the import will not be complete. The column heading should be the same as the ones exported and the column lengths should be as before. If there is an error in the export file, a portion of the imported file will not come through from the error downwards.

When import is complete, there will be an all-text spreadsheet exactly as exported but without any formula overhead. However, it will need to be restored and reformulaed to run.

The first step is to reset the columns to their original width prior to export from the field name in the first row. Row two with the dummy text characters ("X") is superfluous. Delete both rows (F3, Grid delete rows from 1 to 2).

The second step is to remove the quotes from formulae in the table of formulae. If the justification or decimal place is not as desired, justify and set the units in the table. This does not change the formula number.

Reset the widths of the columns to what they were in the original spreadsheet, then go to the main body of the spreadsheet and begin Copying the appropriate formula to the cells. If the preparation was as suggested, it is only necessary to Copy from the cell referenced as a text string.

Finally, strip quotes from all numbers that have quotes around them.

At this point be sure that the new file is saved under a new name, then compare the file lengths of the old and the new spreadsheets (WSTAT with Toolkit II). Aren't you pleased with yourself? For more fun, load and time the recalculation speed of both the old and new spreadsheets.

Some Notes and tips

Changing the Units and/or Justification in a cell does not effect file length.

Changing Units and/or Justification in one occurrance of a formula does not effect the units and/or justification in another occurrance.

A new occurance of an Echoed formula assumes the justification and units of the spreadsheet default setting. However, if a formula is Copied, the units and justification of the original cell are retained.

■

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Another Clock Corrector

Ian Pizer

Clocks and Switzerland live comfortably together. I recently became interested in the subject of timepieces after reading the book "Longitude" which tells the story of the fabulous marine chronometer devised by John Harrison between 1715 and 1761. This incited me to visit the National Maritime Museumat Grenwich in London to see the 4 working originals which Harrison constructed (H1 had wooden wheels, H4 is like a large pocket watch). He was awarded £20000 for the final version.

Having wetted my interest I later visited the International Clock Museum at La-Chaux-de-Fonds which I can highly recommend if time and clock mechanisms interest you and you happen to be in Switzerland.

That is the prologue for the intended subject - how to correct your QL clock automatically via your boot program. Change line 120 and 200 as appropriate to your setup. You need to determine "sec" for your machine. "sec" is the number of seconds your machine LOSES in a week. If it GAINS then "sec" will be negative.

Before running this program the first time you need to store the present date value in file "StoreDate" by doing:

```
open_new#4,win1_StoreDate:print#4,date:close#4
```

```
100       : REMark ****   I call this file win1_adjust_date_bas
110  sec=14
111       : REMark ****   14 seconds lost/week for my machine,
112       : REMark ****   this will be NEGATIVE if your clock gains
120  OPEN#4,win1_StoreDate:INPUT#4,d$:CLOSE#4
121       : REMark ****   finds last date
130  dd$=DATE-d$
131       : REMark ****   present date minus previous date (is always positive)
140  up$=INT(sec*dd$/604800)
141       : REMark ****   sec*fraction of week since last boot
142       : REMark ****   604800=seconds in a week
150  IF dd$ >=604800/sec
151       : REMark ****   adjust date if dd$ is 1 or more seconds
160       PROT_DATE 0      : REMark ****   only if Gold Card
170       ADATE up$
171       : REMark ****   if your "sec" is negative (line 110) then use -up$
180       PROT_DATE 1      : REMark ****   only if Gold Card
190  END IF
200  IF up$<>0:OPEN#4,win1_StoreDate:PRINT#4,DATE:CLOSE#4
210       : REMark ****   line 200 stores the corrected" date" value
```

By having this program (or a call to it) in your boot program, then each time you boot-up, your clock will be corrected. My boot also shows how many seconds (up$) the clock has been adjusted and also the actual time, so I can see what is happening (obsessive?).

The idea for this corrector came originally from Ron Stewart in QUANTA November 1993 page 19.■

Keycoder Quickie

Darren D. Branagh.

If, like me, you write your own SuperBASIC programs, and often use the keyboard codes via CHR$, you might find the following quite useful. A QL owning friend, Hilary O'Kelly, came up with it. He too, was in the same boat, and although there is a table of the various decimal codes for each character in the QL character set in the user guide, it can never be found when needed! Remembering all the codes is virtually impossible, but remembering one line of BASIC is dead easy. Here it is:

```
REPeat a : PRINT CODE (INKEY$ (-1))
```

Enter this one line. Then, when you press a key, the decimal code number is displayed in a column on the left of the screen. It will even differentiate between higher and lower case, i.e. "Q" or "q". Short, simple, and very useful.

■

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ProWesS Delivers - Part 1

- a review and introduction to the ProWesS package

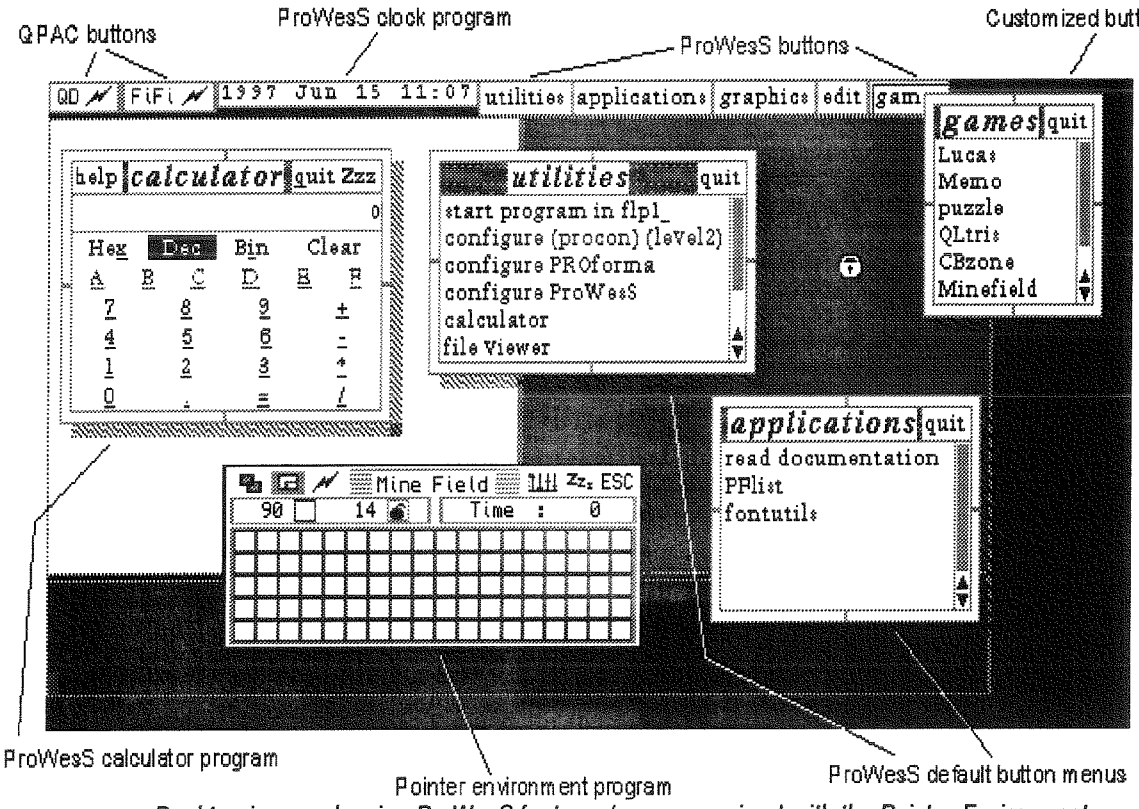
James Hunkins

Introduction [What is it all about]

I originally reviewed a pre-production copy of ProWesS quite some time ago in IQLR. ProWesS has since then matured substantially and is available as a regular release, complete with a slew of small applications and extensive documentation.

What is it? To quote the included documentation, it is a 'software support package'. To go even further with the quote (I love this part), ProWesS 'doesn't do very much by itself'. What a refreshing statement. In reading further, the documentation explains that by itself, you don't get much visible functionality. However, ProWesS is required for certain applications to work. Basically, the ProWesS package supplies much of the functionality and code used by software written for ProWesS. This allows the new software to be more compact, to have a common user interface, and to take advantage of the package's different utilities, font handling, and other advanced graphics. Why would you want ProWesS. New programs (commercial or your own) can be written quicker with more functionality than before. This includes windowing, pointer driven applications. Resizable fonts and graphics are now supported on the QL systems, plus an 'updated' windowing system (window handling methods are very subjective, so I won't offer an opinion as to better or worse there). Even printer drivers can be shared between programs. There are several programs now available (plus the ones included with the package) and the user should be able to develop their own programs to take advantage of the power of ProWesS. ProWesS can also be used to enhance your desktop. Previously, if you wanted programs to start with buttons, you had to understand QPAC II and had to have a separate button per program, which could rapidly clutter your computer monitor. ProWesS includes a button that can either directly start a program (as before) or drops down a user definable list of programs (menu). I use this to group several similar programs under single buttons.

The user will probably also find that setting up the buttons and menu buttons under ProWesS is simpler than changing the boot file under QPAC II. If you don't write your own programs



Desktop image showing ProWesS features/programs mixed with the Pointer Environment

and just want to add ProWesS type programs, you won't even have to understand buttons as the ProWesS loader will set them up for you automatically. ProWesS requires the pointer environment (included). To manage your buttons in what is called a button frame, you should also own QPAC II. This is not required, but it does make things neater. System requirements may be an issue. As ProWesS is very powerful, it does eat up computing power. Therefore I definitely don't recommend it on an original QL. It seems to work adequately on a Gold Card QL, and works well under a QXL, Super Gold Card QL, and a 100MHz Pentium based QPC emulator. I have not tested it on the other systems and emulators available.

Included Software/Utilities

The ProWesS package comes with several operating system extensions and utilities. I have put these together in two groups with brief comments. If you begin to feel intimidated while reading the following don't worry. For the normal user (RE: non-programmer), the system extensions are loaded automatically and you don't really need to understand their function. For the programmer, you probably won't have such a rough time, but if you do, there is plenty of included documentation. Remember, while all this sounds pretty intense, the final result makes it easier on both the user and the programmer.

System Extensions

ProWesS: The core of the entire package, this is a new window manager. It can work in parallel with the older QL WMAN window manager (part of the pointer environment). ProWesS is not coordinate driven but works on spaces relative to other spaces, making it screen size independent. Sizing, colors, etc. are globally controlled so that after you configure the system the first time, all your ProWesS programs will inherit the same look. For you software fans, the interface to ProWesS is strictly event driven, the modern way of doing things in a window/pointer environment (more details under the programming topic later).

PROforma [PROGS Font & Raster Manager]: A graphics sub-system used by ProWesS and first seen in the LINEdesign vector drawing program. It includes modern device independent 'primitives' (low level functions) and uses vector fonts. The fonts are a variation of the commonly used Adobe Type 1. They are an improvement over the QL's native bitmapped fonts as they can be remapped to any size you require and still maintain their smooth outline. With an optional package, the user can convert commonly available fonts to the PROforma format, expanding upon the 4 fonts included (3 of them have 4 versions each, totalling 13 versions). PROforma is included as a DLL (dynamic link library).

Professional & Graphical Software

ProWesS

ProWesS is a new user environment for the QL. ProWesS is short for "PROGS Window Manager", but it is much more than that. Apart from a new window manager, it contains all the system extensions from PROGS, and is essential if you want to run programs which need these extensions.
The ProWesS reader is a major part of the package. It is a hypertext document browser. This means that text files which include formatting commands (including pictures) and possibly links to other files can be displayed and read in this program. This is used in ProWesS to read (and possibly print) the manuals, and display the help files. The hypertext documents which are used by the ProWesS reader are in HTML format, the format which is popular on Internet to display World Wide Web pages.
Another important aspect of ProWesS is the possibility to allow programs to automatically install themselves on your system, and to be able to run them without resetting the system. This means that, when you get a new program, all you have to do is insert the disk and indicate "start the program in flp1_", a menu option in the "utilities" button. To install a program, you indicate "install software", and the software can be added to your system. This way, you don't need to know how to write a boot file to use the multi-tasking capabilities of your computer.
ProWesS includes many programming libraries. These include syslib, an interface to the operating system, PROforma, a vector graphics system, allowing rendering both on screen and on paper (via a printer driver). The DATAdesign engine is also part of ProWesS. It is a relational database system with a bonus, as you don't even need a key field. You get a powerful record at a time data manipulation extension to the language you already use. Of course it also includes ProWesS itself, the new resolution independent window manager.

PFlist

Easy to use program to create listings on any printer (especially inkjet and laser). This ProWesS application allows you to indicate the files which have to be printed. Each column contains a footer which can include the filename and filedate. The listings always allow perforation. PFlist can create your listings in two columns and in landscape (or both).

fsearch

File search utility with many useful options, like the choice to search only files with a certain extension, and whether or not the directory tree has to be scanned. All occurences of the searchstring will be displayed with line number or offset. You can also use special matching features, like case dependent, matching a space with a stretch of whitespace, and searching for a word dilimited string.

font-utils

manage your font collection. You can preview fonts on screen, see what characters exist in a font and convert Adobe Type 1 and similar fonts for use in ProWesS.

DATAdesign

Never before has it been so easy to create, fill in and maintain your personal databases. To start a new file, just type the names of the fields. To add or delete a field, no problem, just do it. To change the name of a field, just indicate it.
What's more you can choose to look at only those fields you want, and in any order you specify. And you can select which records you want to view, and which not.
DATAdesign allows you to have some hidden comments for each record, have a general look at the file (in tabulated form) or to transfer a record into the scrap of hotkey buffer, so you can easily import a record in your favorite text processor or editor !
Security is a strong point for DATAdesign. Usually files will be memory based, for maximum speed. Files can also be disk based, making sure all changes are immediatly stored on disk, so even in the event of power failure, you can at most loose the changes to one record !
Naturally, DATAdesign is good at sorting and searching. And if you were using another database, you can convert Archive or Flashback files to DATAdesign.
The new v4 of DATAdesign makes the program even easier to use than before. You can now also have QD-style icons on your screen to make the program even easier to operate.

LINEdesign

This is the program which brought QL computing into the nineties. Finally you get access to a modern technology, "vector graphics." This means that your page will be stored in a mathematical form, and not as a collection of pixels.
With LINEdesign, you can create artistic drawings, technical drawings, process bitmaps (even scale and rotate them!), and any kind of vector drawings. You can draw lines, curves, circles, ellipses, pies, squares, rectangles, rectangles with rounded corners, and any combination of these to create the most fabulous drawings ever seen. Because LINEdesign is a vector drawing program, any part of the picture can be moved, scaled, rotated, slanted without any loss of precision or resolution. In LINEdesign, pictures are device independant, meaning that the printout will be the same on any printer (e.g. same size and position).
Also LINEdesign is good at handling text. You can easily put titles and full paragraphs on the page. All the fonts can be displayed at any size, rotation, etc. All the fonts which are available to ProWesS can be used in LINEdesign.
LINEdesign is a drawing program, but it can also be used by people who are not good at drawing. LINEdesign is a great program for making leaflets, posters, and any kind of printed work. Lots of clipart and extra fonts are available from public domain libraries and BBS's. You can even import Adobe Illustrator files.

All our software has electronic manuals, which can be read and printed in the ProWesS reader. However, we can also supply printed copies of the documentation (or even your own HTML files). The costs are BEF 3 per page, plus postage costs. Contact us for more details.
ProWesS does not include the programming documentation. This is available via bulletin board and public domain software suppliers. The programming documentation is readable in the ProWesS reader, and partly in DATAdesign (the demo version is be included). We can supply the programming docs for BEF 100 (HD disks only!) If ordered with something else, you don't have to pay extra postage.

ProWesS - BEF 2400 DATAdesign - BEF 1200 LINEdesign - BEF 1200 fontpack - BEF 3000 fontutils - BEF 1200 PFlist - BEF 600 fsearch - BEF 600

Payment terms :

You have to run ProWesS to make LINEdesign, DATAdesign, fsearch, fontutils and PFlist work (even though DATAdesign uses wman).
All our software is normally supplied on high density (HD) disks. However they can be obtained on double density (DD) disks at an extra costs of BEF 100. To use ProWesS and any of our other packages, you need a system with at least 2MB of memory. You should have a harddisk although a two disk system will also work. The use of SMSQ/E is strongly recommended for optimal use of ProWesS.
If you are VAT registered (specify registration number) or live outside the EEC, the amount to be paid is the total (including postage) divided by 1.21 (no need to pay too much).
Payment can be done by EuroCheque in BEF, or by VISA, EuroCard or MasterCard. Credit card orders can be handled by phone. For credit card, please specify name of card owner, card number and expiry date.

Postage : Costs of postage and packaging have to be added. You can choose the quality. Rate depends on no of programs.

copies	*priority mail* Belgium	Europe	World	*ordinary mail* Belgium	Europe	World
one	100	200	240	100	120	145
two	135	340	420	135	190	230
3 or 4	160	560	770	160	310	395
5 to 8	185	870	1250	185	550	705
more	295	1130	1610	295	800	1030

All prices are in BEF, including 21% VAT

Haachtstraat 92, 3020 Veltem, Belgium
tel/fax +32 (16) 48 89 52
joachim@club.innet.be

Syslib: This is a DLL that includes low level library routines, primarily as an interface with the operating system plus some user code. While similar to the standard library that comes with C68, it has been modified to support re-entrant code (for example, you can be running several copies of a program but only have to load one set of code), provide only safe access to QDOS, allow for additional external modules (such as new printer drivers), and has removed the QDOS graphics calls that the PROforma DLL replace. The naming of routines has also been standardized which should help reduce errors and make functions easier to find when programming.

DLL Manager: A DLL is a Dynamic Link Library. Normally, a 'C' program contains all its own code when loaded. Much of that code may be also used by different programs, resulting in having duplicate code loaded for each program. The DLL Manager allows different 'C' programs to link to previously loaded library routines, effectively sharing the code.

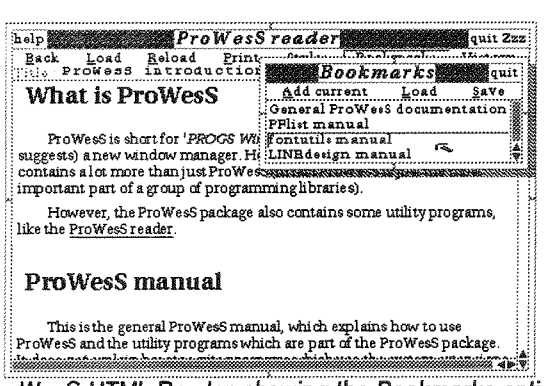
DATAdesign engine: This is a data base manager, allowing for multi-users and/or multiple programs sharing the same DATAdesign files at the same time.

Others: the remaining extensions are primarily supplied by other software vendors but are required (and therefore included) for ProWesS to function. They include the Thing system (Qjump), Pointer Interface (Qjump), Scrap extensions (Jochen Merz Software), Hotkey System II (Qjump), and Global Variables. The Thing system is used by the DLL manager for finding DLLs. The pointer interface supplies the mouse and some of the low level window functionality. The scrap extensions allow data to be passed between applications. The Hotkey System II allows key combinations to be assigned to specific functions and adds last line recall and a single line scrap buffer. The Global Variables are like variables in SBasic or 'C' but can be accessed by any program within the system.

Utilities

Prg_loader: This is the program that is used to install a new program or load a program from floppy disk. It is also used to load ProWesS and its related extensions and buttons during bootup. This is a very powerful utility (as will be illustrated later during the walk through of the ProWesS package installation.) It reads a command file with text line instructions that can do everything from run programs, request user input, set global variables, wait for something to happen or a time out limit, to create ProWesS program or menu buttons.

HTML Reader:



ProWesS HTML Reader showing the Bookmarks option

This is a file viewer that works with files done in the HTML format (HyperText Markup Language - allows formatting suggestions within the document and links to other documents; commonly used on the internet to display WEB pages). It has several nice features including an ability to go Back to the previous document, an ability to choose from a list of Bookmarks (pointers to your favorite or most commonly used HTML files), and a History list of what you have looked at during your current session so that you can quickly refer back to some document that you were looking at before. It also can print your HTML documents. This is a major utility as the ProWesS documentation is done in HTML. You can also get many documents from the internet formatted in HTML.

Procon [level 2 configure]: This is a configuration program similar to the pointer environment configuration programs, 'Config' and 'MenuConfig' but written under ProWesS.

PWconfig: This works as a specialized type of line editor and is intended to help you edit the ProWesS configuration (_cfg) files.

PFconfig: This utility configures PROforma. It has options to load, configure and test printer drivers, to set a default printer selection, to set different memory options, and to add Fonts. It is a big improvement from the original configuration methods found in the pre-release version of ProWesS.

Calculator: This is a basic calculator that also includes Base conversions.

File Viewer: This simple utility allows the user to load and view any text file.

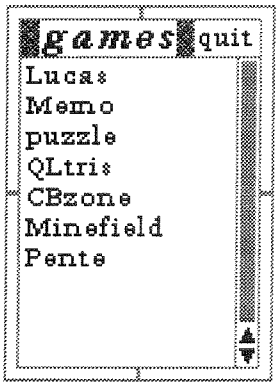
Global Variables: This displays all global variables and allows their values to be changed.

Windowing Environment

Window Operations: For users familiar with the pointer environment or other operating system windowing environment, the move to ProWesS will be simple. For others, well, it should also be simple. ProWesS windows allow you to manipulate them by placing the pointer over any window border and pressing the left mouse button to move the window and the right mouse button to resize the window. Once one of these operations is selected, the familiar pointer environment move or re-size icon appears until the operation is complete. When moving the window, you even have a choice to redraw the entire window (the rate of redraw is adjustable according to your system's power) or to just redraw the window's outline while it is being moved. Resizing a window only redraws the outline as redrawing while resizing requires just too much processing power. If a window is larger than the screen or larger than its primary window (the main window of a program), scroll bars (vertical and/or horizontal) are automatically added. These scroll bars let you shift the window so that you can see any section of it as required. Under SMSQ/E you can even scroll a window by trying to move the mouse pointer off the screen (towards the non-visible part of the window). The standard HIT (left mouse button or ‹space›) and DO (right mouse button or ‹enter›) are available. Also all keypresses are case sensitive. If a keypress does not have an action assigned to it, ProWesS will then try for the other case of the same key. Also supplied are certain special windows; a file select, a directory select, and an edline object window. The first two allow you to choose a file(s) and directory. The edline window allows the user to edit a line of text.

Buttons: ProWesS offers a powerful button capability. A button uses the 'startup' program that loads and processes a _ldr file. This file can make the button simply start a program, do multiple activities, or drop down a user definable menu.

The drop down menu is new to the QL scene and is a great way to organize your different programs.



The user can make their own customized menu buttons

Continued in the next issue

Multi-Processing, what is it good for? - Part 1

Nasta (Zeljko Nastasic)

...well, you can be sure I'm not going to say 'absolutely nothing', in fact, quite the opposite.

Multi Processing, or MP for short, is a method where multiple processors are used in a computer system to accomplish its goals. Of course, such a definition sounds very general, and that's because it is! The reason is of course, that it is very difficult to define what a computer system's goals really are, or for that matter how we define a computer system. To make it even worse, all that might even change in the course of the operation of the computer system.

It could be argued that practically all computers today are in a crude way multiprocessing. If you look at a typical computer, you would probably be able to find several processors. There is of course the central processing unit, or CPU, which is what we usually think about when someone says just 'processor'. However, there are lots more. There could be a dedicated keyboard processor, there is at least one in the hard disc electronics, there is even one in the mouse. Take any one away and the system's functionality is impaired or it fails completely. Hence, all of the processors are indeed working together in a fashion. However, this particular way of looking at things is not what we are here for, although I will make some references back to it.

Back to the basics

What does a computer do? Cynics would say, nothing overly useful, and from a somewhat philosophical standpoint they would probably be right. Mathematicians would say something which probably even some of them wouldn't understand. The truth is I guess somewhere in the middle - a computer allows you to input data, to store data and to perform various operations on input and stored data to get output and new stored data, then this can again be used as the data from the beginning. Put in the proper data and perform the right operations in the right order, and the output data will represent something useful. But, who provides the data, and who uses the results? It may be something outside the computer, or other parts of the computer, or the data may be results from previously executed instructions, or a mixture of

all of that. If we are looking from a standpoint of a single instruction, its data is expected to be held somewhere in memory, or it is fetched from an 'input', and the results go back to memory or to an 'output'. What these are isn't clear at this stage. If we are talking from a standpoint of, say, a word processor, i.e. a program, then its data is coming from the user, and goes back to the user and/or to some form of storage. Between those two extremes, in a wheels-within-wheels fashion are many layers of abstraction of where data comes from, what is done to it, and where it goes to. As computer technology progressed, so did the level of abstraction a computer was able to use. In the first machines, all the loading of both data and instructions was done by the operators, and then put into the machine's memory by dedicated circuits. Then, the 'CPU' would be started, and when all the instructions in a program were executed, the 'CPU' was stopped and the data examined again by special circuits. Today, all this is a part of the CPU's program, inputting and outputting data by way of devices which we take as standard, like a keyboard, a mouse, a screen, or storage devices like floppies or hard discs. Whereas in the beginning there was only the 'useful' part, which is the program to process the data, today there is an operating system, which is a program enabling an operator to use the CPU by way of standard 'controls', and even this program has many sub-programs which handle translating of data as the user sees it to suitable coding for the actual useful part (which is the program processing the data) and back. Although this might be at first glance completely unrelated to MP, it is how the whole MP affair started.

The concept of scope

Let's return for a second to the 'wheels-within-wheels' metaphor above. The many levels of abstraction, and what we can say about them is sometimes referred to as 'scope'. It is a logical extension of how people handle problems - by breaking big ones into small ones until they can't be broken down any more, and then tackling one by one, not bothering too much with the bigger picture. In fact, the bigger picture is purposefully masked to simplify the problem enough to be able to solve it in the first place. An example - suppose the goal is to print a line of text on the screen. So, what do we do? We print out each character in turn. And how do we do that? Well, we look at how each one looks and copy that picture to the screen. And how is that accomplished? Well, we draw each pixel one by one. And how? By setting the appropriate bits in a part of memory which the hardware of our computer will make appear as pixels on the screen. So how's that done? By using the appropriate instructions, etc, etc. Looking at each of these 'levels' we can see that the more abstract relies on the less abstract, without the actual need to know what the less abstract does. Even the very lowest levels have built-in abstraction in them, like which instructions are available in the first place. The 'scope' is in short what levels of abstraction we are looking at to describe what our system is doing. We may be looking with a scope of one instruction and it's data, in which case we wouldn't get any idea about the 'big picture', i.e. that this instruction and data are actually a part of a text processor being run, or we may be looking with a scope enveloping the whole machine, where we could easily say it's running a text processor, but could never give an accurate enough answer to 'how'. This problem of not being able to represent exactly what is being done in an efficient manner is at the very root of practical MP, as will become evident later on.

Data input, output and storage

In the above discussion, words 'input' 'output' and 'storage' figure prominently - and except for the matters of user interfacing, which are a subcategory of input and output, they have, in due course of computer development, become fairly standard. User interfacing is still under a great deal of developement. Standardisation is especially true for storage, and input and output which has to do with interfacing to other machines as opposed to humans. The methods used to accomplish the tasks of input, output and storage are fairly well known and represent a separate subset of operations. However, some of these operations are fairly complex, and are actually sometimes handled by whole separate computers. Because of this they either already fall under MP or can be a relatively obvious applications for MP.

The user interface

A particularly demanding category of input and output (and which frequently demands huge amounts of storage to be accomplished too) is the user interface. Because the users have quite different ideas on how to represent data, compared to it's actual representation in the computer, some sort of interface, a mixture of

software and hardware, is needed to handle the 'translation' back and forth. Both ends of the equation, the user and the computer, are subjects to thousands of debates, involving cognitive and perceptive psychology on the user end and coding and data structure design on the computer end, with information theory linking them both.

The fact is, the way humans organize or perceive data, as a rule isn't very compatible with the way data is represented or organized in a computer. Because of this, the user interface part of the computer is incredibly demanding, both on hardware and on software. Now, you might think that there isn't much to it, really - how difficult can a keyboard and a display be to support by the necessary hardware and software? If so, you are forgetting a very important fact - we do not have keyboards and screens because they are the best solution, but because they were the best we could do with what was available. Arguably, we would like a voice interface and a 3D virtual reality, but in a typical computer, there just isn't enough computing power to achieve it. The reason that I'm mentioning all this is that the matters of user interfacing can be a good application of MP, but we will get to that later.

The role of multitasking

Lets talk about time for a second - how long does it take to perform a certain operation is very important when interfacing systems which by performing these operations, cooperate in some manner. Though it isn't exactly obvious, the same happens when a computer is used by a user. The human in front of the screen is a data processing entity as well, and although the way it's done in a human and in a computer are very different, the same interfacing rules apply. Why is this important? Because the speed at which a human can input and output data is very different that the speed a computer can do it. What's more, this is greatly dependable on the kind of data we have in mind. It is very rare to see a human typing in more than 10 characters a second, or reading more than 30 characters a second. It is a relatively simple matter for a computer to be able to handle hundreds of thousands more in the same time, including processing all that data in an useful fashion. On the other hand, when someone says 'banana' you will know what that is almost instantly, whereas a computer might take tens of times longer to recognize the said word, this is just to illustrate the multiple aspects of this problem. However, what is important is that there can be great differences in speed, which can be used to an advantage.

In the 'olden days' when computers were very expensive, someone must have realized that the user interface part which was then a simple keyboard and a teletype machine, or if you were incredibly lucky, a screen, took a long time because the computer was mostly waiting for the user to type something in. When all the data was entered, that's when the real fun stuff began for the computer. So, someone surmised that instead of waiting for the user, the computer might be spending time in solving a problem that was already put into it beforehand, maybe even by another user. This is how the multi-user and multitasking concepts came into being - replace all the waiting loops with something useful to do, making the computer more efficient - but only if there was actually more than one thing to do. Because of this last fact, multi-user computing has been much more popular than multitasking - which is actually becoming widespread only in the recent years - reason being, it's difficult to show a single user how to effectively organize what's being done to take advantage of multitasking. In contrast, having multiple users offers the logical association of each user with one task. In many respects, the 'philosophy' of a computer's operation, and of the operation of various applications, can help do much of the organization automatically - otherwise a multitasking system soon reverts to simple task switching if there is only one user. This last observation is incredibly important for MP systems, which are in their simpler form, only a small step removed from multitasking - in essence, each task can be handled by a separate CPU if there is more time to be spent in executing tasks than there are waits available - meaning a single CPU would be overloaded. In a single CPU machine, tasks would have to be scheduled using some priority scheme, making some slower and some faster. In a MP machine, any excess from a single CPU could be delegated to another CPU with more time on it's hands, in a manner of speaking. However, this brings us back to the concept of scope - a multitasking system handles task scheduling using the scope of a single task - but surely, there are things that could be done at the same time, in parallel, even though they constitute a single task.

Granularity

Here we come to the hardest nut to crack. The complexity level of those operations that a MP system can process in parallel, is called granularity. Granularity and scope are two sides of the same coin. A system which can schedule operations among many processing units at the level of say, machine language instructions, operates at the 'machine language instruction' granularity level. A system that gives each user a separate CPU to run his applications on, operates at the 'user application level' of granularity. It is probably quite obvious that for the great majority of applications, these two extremes are completely unusable - the first requires either very special instructions, or is very impractical because the overhead of deciding what instruction should be executed on which CPU and where it's data is, happens to be a problem which takes more time than the execution of the instruction itself. The other extreme has an obvious problem - it needs more than one user. MP systems derived from multitasking systems operate only at a slightly lower level of granularity, that is one of tasks - assuming the user wants a high enough number of tasks or complex enough tasks, a MP system will be fast and efficient, and is probably the first logical step from multitasking to multiprocessing. However, there are again two obvious problems - what if we have more tasks than CPUs, for instance? The system will obviously have to revert to a cross between MP and multitasking - some CPU or CPUs will be running more than one task. Directly associated is a problem on how to decide which tasks go to which CPUs in order to achieve the most efficient 'fit'. The obvious reversal of this problem is the situation where there are more CPUs than there are tasks - and this will mean that there will be CPUs doing absolutely nothing, and yet we have paid for them! In other words, the machine is inefficient to some degree. And, with this we come back to a previous problem - couldn't we have 'split' a task into two parallel tasks and thus found something to do for an idle CPU, and get the added benefit of the split task being completed in a shorter time, meaning, if our machine was operating at a level of granularity smaller than a single task, but larger than a single instruction, maybe it could have been more efficient? Or, in other words, what level of granularity do we need to make the machine most efficient given the resources at hand? This is the very essence of the granularity problem!

Continued in the next issue

Bugs 'n Fixes

Q. I have a Prowess based Line Design which I cannot get to print. Any suggestions?

A. ***Roy Wood replies:*** Clear out everything from the button frame. Believe it or not, this seems to fix the problem ***[maybe Roy now regrets being cheeky to Geoff Wicks over his button-free zone - Editor!] [Last minute news: problem successfully tackled by PROGS]***

Q. I cannot get Text 87 to work properly in certain screen resolutions on the Aurora. Why?

A. ***Ron Dunnett replies:*** I have a fix available, contact me at Qubbesoft P/D. Aurora modes use a fixed line width, which seems to cause problems for software like Text 87 in modes other than 512 or 1024 pixels wide.

Q. Anthony Trice reports that Image Processor V2.09 either can't find its default file on his hard disk, or ignores certain settings such as startup screen.

A. ***Dilwyn Jones replies:*** Image Processor V2.12 fixes this problem, which was due to a bug in the startup file handling routines. Unfortunately, two versions of V2.09 existed with different efforts to fix the problem, with varying degrees of success and unwanted new bugs introduced. V2.12 is more secure. Now that Quo Vadis Design have closed down, free updates to V2.12 may be obtained direct from me, at my address on the inside front cover.

Q. I have patched my Quill in an editor to run from DEV1_ to allow it to be used from hard disk as described in a recent issue of QL Today. Unfortunately, when started with the EXEP command it locks up QPC. What can I do?

A. ***Jochen Merz replies:*** There is no known problem with the EXEP command - in this case the user's patch to Quill corrupted a few bytes around where the device names are stored, so caused unwanted side effects. So on this occasion, there was no problem other than a corrupted copy of Quill - the problem went away when a fresh copy was patched again.

If the unmodified copy did not work before patching the DEV in, then it may have been treated with GRABBER (a QRAM utility). In this case, use EX instead of EXEP because GRABBER will do the grabbing.

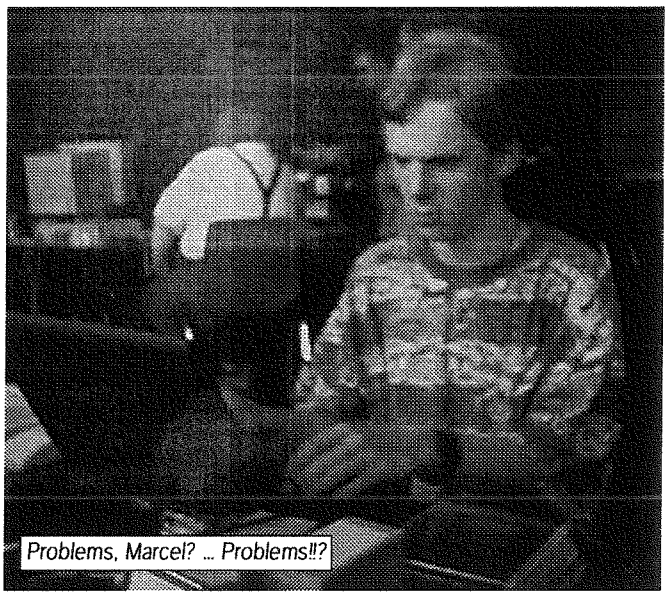
■

QL-Meeting in Solms, Germany

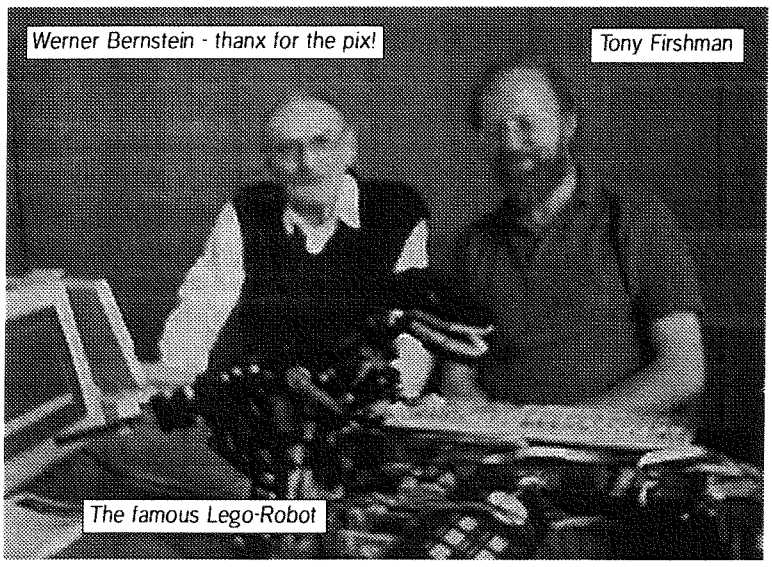
Albin Hessler

The German speaking QL-community (I call it QL, although I mean all that runs under QDOS or SMSQ) has reduced to a small but excellent circle of enthusiasts. Nevertheless we are steady and still rather plenty. Naturally we are always interested in news and events concerning the QL. One of these good events was the meeting in Solms on July 15th. The meeting was organised the second time by Reinhardt Heim. The "Taunushalle", the city hall in Solms is a really good place for such a meeting. Solms is near Wetzlar, about 60 km north from Frankfurt. As this is about the middle of Germany, anyone can reach the place in a few hours. So the three of us (Jochen Hassel, Marcel Kilgus and me - we all live in the same district, only a few kilometres from each other) arrived at about 11 AM. Unfortunately we had only updates with us and nothing really new to present but wait for the colour wonder, which might encourage us for new projects). QPC is very popular for owners of a PC-notebook (or did they buy the notebook to run QPC?). Unfortunately they sometimes cause problems, as often the hardware does not quite conform to the PC-standard. So Marcel was very busy. Fortunately, when configured correctly, nearly anything PC-like can be convinced to work with QPC. I like those meetings, because I can meet people who do really intelligent things in private or professional areas with their QL or its descendants. As an author of a development system I'm always interested in seeing programs which were produced using my tools. There seem to be some very interesting projects coming from England in the near future. In direct contact it is always easier to clear problems, so also in Solms I could give some hints, though naturally I do not have anything in mind which I developed several years ago. Jochen Merz as usual was very busy all day, no wonder, as he concentrates on most of the commercially available software for the QL. In the afternoon we got to know two young hardware specialists with their rebuild of a QL under construction. A very interesting project using cheap standard PC hardware. This might be another surprise in the near future. As usual the meeting ended for some of us with a common dinner in a nearby pizzeria.

■



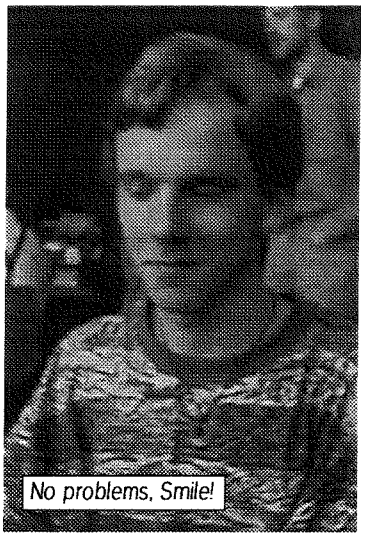
Problems, Marcel? ... Problems!!?



Werner Bernstein - thanx for the pix!

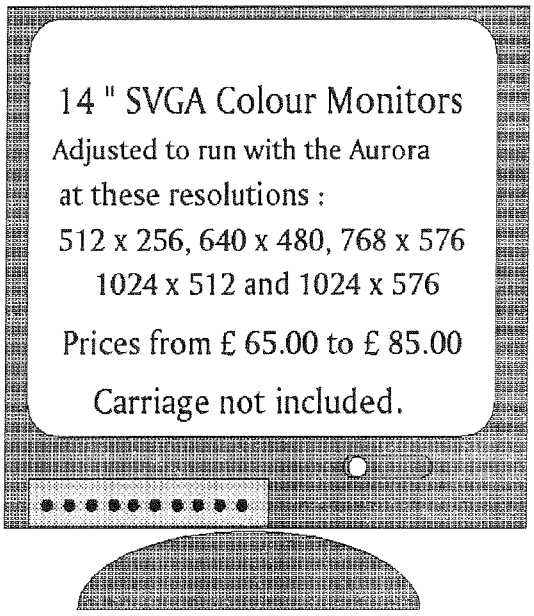
Tony Firshman

The famous Lego-Robot



No problems, Smile!

Get a better view



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Q Branch News

This month sees the release of another new product that we hope will make it easy for anyone to put an Aurora into a Tower Case. We have made a mounting board which will take the Aurora and Qplane and then slot neatly onto the mounting holes in any standard tower case using the mounting posts supplied in the tower case kit. We are supplying all the nuts, bolts washers and board ties you need so banish all those D.I.Y. blues and

Braquet

Q Count has now been officially released and is only available from us. The final batch of Super Gold Cards are in stock and selling well so, if you want to expand your memory, call us now ! We are supplying this batch without the 5 volt adaptor because this has been the cause of many of the problems experienced by previous users. We are also able to supply some cards which are already adaopted to run on the QPlane so, if you buy a package from us (Qubide / Aurora / QPlane / Super Gold Card / Braquet etc) you can plug it all in and let it fly without recourse to a soldering iron. These boards cannot be plugged into a standard QL without modification. The SVGA monitors that we supply come complete with a circuit diagram and are proving to be very popular.

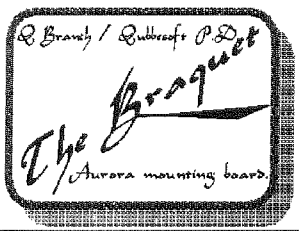
Hardware

QXL II	£ 200.00
Super Gold Card	£ 160.00
Recycled Gold Card	£ 60.00 *
Aurora	£ 120.00
Qubide	£ 55.00
Qplane	£ 25.00
Aurora cables	£ 3.00
Aurora rom adaptor	£ 3.00
The 'Braquet'	£ 16.00

* when available.

Package deals

QXL II + SMSQ/E	£ 260.00
Aurora + SMSQ/E	£ 180.00
Aurora + SMSQ/E + Super Gold Card	£ 330.00
Super Gold Card + Monitor	£ 380.00



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QPC

SMSQ/E owners
£ 78.00
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£ 100.00

'Just Words' by Geoff Wicks

THESAURUS, STYLE CHECK, SOLVITPLUS 2
£ 15.00 ea / ANY 2 PROGRAMS £ 25.00 / ALL 3 PROGRAMS £ 35.00

PROGRAMMING

QD v 9.04	£ 53.00
QD + QBasic	£ 69.00
QD + Qliberator + QBasic	£ 110.00
Qliberator	£ 50.00
Master Spy v 3.3	£ 30.00
QPTR	£ 37.00
Easyptr pt 1	£ 37.00
Easyptr pts 2 & 3	£ 18.00
QMake	£ 18.00
QMon / JMon	£ 22.00
Basic Linker	£ 22.00
DISA 3	£ 37.00
QMenu	£ 16.00

SMSQ/E

Gold Card / Atari / QXL version
£ 76.00
Various Atari versions : call for details

!!! NEW PROGRAM !!!

QCOUNT

Pointer driven home accounts program. Keep track of your bank account, stocks, etc. Stores it's data in DATAdesign format

£ 25.00

UTILITIES

FiFi 2	£ 22.00
QSup	£ 32.00
QSpread	£ 66.00
Cueshell 2	£ 37.00
Qload / Qref	£ 15.00
Disk Mate 5	£ 28.00
QPAC 1	£ 20.00
QPAC 2	£ 40.00
QTYP 2	£ 30.00
QLQ	£ 32.00
LDUMP	£ 26.00

Q Branch high quality Mouse Mats
£ 5.00

ProWesS

ProWesS	£ 48.00
DATAdesign	£ 24.00
Fontutils	£ 30.00
File Search	£ 12.00
PFlist	£ 12.00
Fontpack	£ 60.00
LINEdesign v 2.12	£ 24.00

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£ 79.00

Typset 94
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Fountext 94
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Page Designer 3	£ 40.00	Flashback SE	£ 40.00
QIndex	£ 20.00	Flashback	£ 25.00

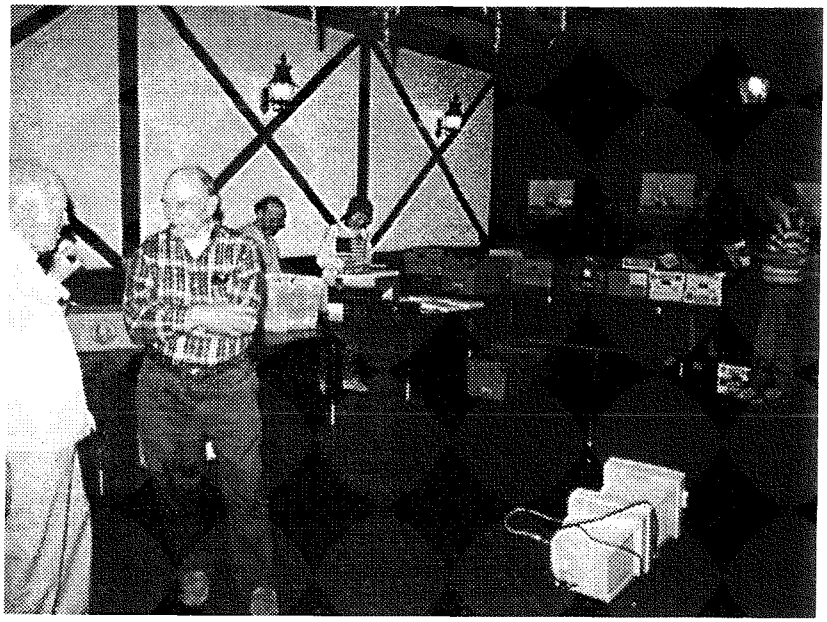
PLUS MANY OTHER PROGRAMS PREVIOUSLY SOLD BY QUO VADIS - call for details

Necessity Caused the Invention of This Surrogate Motherboard

Roy Wood

My QL tower case had seen better days. Dragging it in and out of several QL workshops and user group meetings had made the assembly rather loose and the original construction was weakened considerably by the injudicious application of a hacksaw in order to get the long QL motherboard into the case. I also decided that the side plate, used to mount the PC motherboard would be no use to a QLer like myself so I tossed it into the dustbin. When I changed the old QL motherboard for the smaller and more efficient Aurora the whole thing became decidedly wobbly and I got so fed up with taking the case apart at every show in order to get it working that I decided the time had come to give the machine a new house. Thinking cap on. Well the first thing that occurred to me was that I did not have to take a hacksaw to the case any more since all of the components, Super Gold Card, Aurora and Qubide would fit into the case with ease. I looked at other people's set up and decided on a whole new tack and that is what this article is about. In a PC tower case the motherboard fits onto the side panel and, if you buy the case from new, you get a small box of plastic feet, screws and mounting posts to do this. The Aurora, being a lot smaller than a PC motherboard, will not fit onto these mountings but there had to be an easy way to deal with this. It occurred to me that all I needed to do was to get a piece of plastic board, cut it to the size of the PC motherborard, drill a few holes and add a couple of brackets and I would have a completely dismountable QL. In reality it was even easier than I had first thought. Here is how to do it. All you need is a piece of plastic board about 31 cm x 21 cm, two right angle brackets (available from your local hardware shop for around 30p), a handful of screws and a bit of patience (No blunt scissors and no adult to help me for those of you who remember Blue Peter). I went to a local glass shop and bought an offcut of the perspex sheeting that they use to make temporary windows. This only cost me about £3.00 and was enough to make three mounting plates. I cut this into two pieces, one 21 cm x 22 cm to make the main mounting plate and the other 16.50 cm x 8.5 cm to hold the QPlane. I then drilled holes at the corners of the main board corresponding to the keyhole type holes on the tower case side panel. I was then able to insert the plastic mounting feet into these holes and slot the board into the plate. There are a few threaded mounting posts in the tower case's accessories pack and these should be screwed into the side plate and holes drilled in your plastic board to take the screws that will hold your fake motherboard solidly into the case. Next you should decide whether the you want to mount the board vertically or horizontally. I mounted mine horizontally so I could get to the mounting screws easier so I will explain it from that point of view but you can decide for yourself and make the necessary adjustments. Once you have made the mounting board you need to mark the positions for the holes to mount the Aurora. Once you have drilled these holes (do I need to say you should not drill through the Aurora itself but mark the holes and then drill them?) you should insert four bolts and tighten the nuts down onto the board. You then get four plastic washers, place those over the nuts and put the Aurora onto them. The next thing to do is to couple the Qplane to the Aurora and hold the other piece of plastic board against the Qplane so you can mark the position of the holes needed to attach it. You should do this with the two boards touching at right angles and , at the same time, mark the position of the holes for the right angle brackets. Drill these holes and, using the same procedure as above mount the QPlane and angle brackets onto the board. The final stage of the procedure is to bolt the Aurora onto the main board, plug the Qplane onto it and then screw the angle brackets down. You can then slide the whole assembly into the tower case side panel, add the other peripherals such as Super Gold Card and Qubide and as a finishing touch hold everything together with PCB mounting clips available from Maplins or other electronic suppliers for a few pence. That is all there is to it. Starting from a virgin case I had the whole thing built, assembled and running in three hours. The advantage of this system is that you can use the panels at the rear to take all of your input and output plugs and the entire system can be removed intact for testing, maintenance or upgrading. The four push out sections in the case will take the two serial ports SER 1 (9 Pin D plug), SER 2 (25 pin D plug), parallel port (25 pin D plug) and monitor (15 pin D plug). I then pushed out a section in the rear panel and cut out a section in one of the panel covers provided in the tower case accessories

kit to take the SER 3 (25 pin D plug) and the mouse port (9 pin D plug) from the SuperHermes board. Another panel cover was drilled out to take the two network port connectors and the finishing touch (and the only piece of adapting I had to do to the whole case) was to drill out a hole to take the keyboard connector. I could have made another bracket at the top of my fake motherboard to take the keyboard plug so that it lined up with the hole in the case in the same way that a PC motherboard would but the D.I.Y. urge was wearing off by then and I wanted my QL working again.



The Parent Thesis - The Birth of the Braquet

So, after building this unit for my machine and proudly showing it off at a couple of shows I had people saying to me, 'Can you make one for me ?'. I decided that the thing to do was to get them made up properly, without my ragged edges and slightly-out-of-line holes. A local plastics company looked at the prototype and built them for me in sleek black plastic (yes I know it is inside the case but you always want to show off a bit don't you?). Here comes the advert. Q Branch and Qubbesoft will be selling these items - now officially named The Braquet - and they should be available from the next workshop. We will supply them complete with mounting screws, stand-offs and washers so that all you need is the plastic feet and threaded stand-offs that come with the tower case itself. We can't make it any easier than that can we ?

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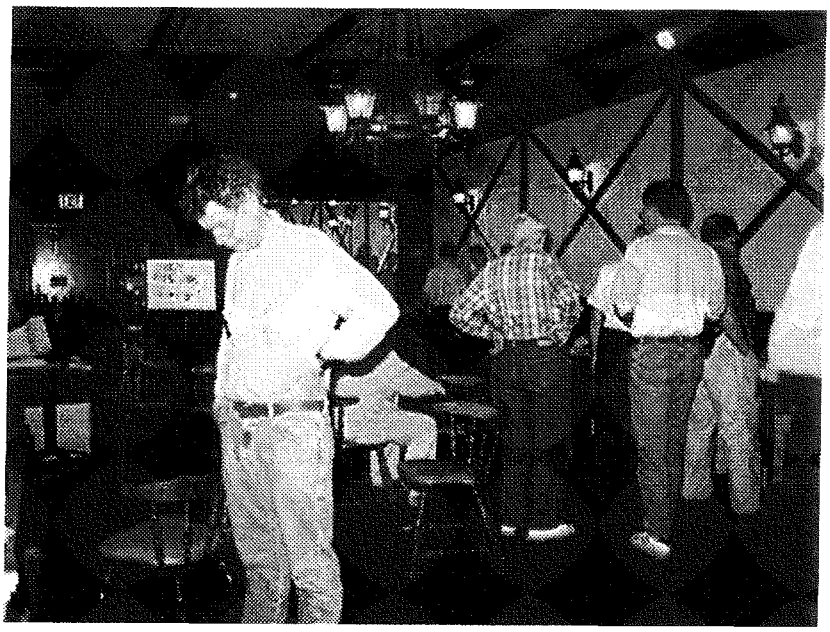

QL Show USA

Space is short in this issue, but here are some visual impressions from the show. A detailed report will follow in the next issue.

Smash with Chips?

A Review of Smash

Darren D. Branagh

Wonderful stuff smash. The stable diet of every penniless student in the land - especially the ones that can't cook properly! (I speak from experience).

In case you don't know what I'm on about, smash is an awful powdered substance, which, when mixed with milk (or is it water - I really don't remember) over a cooker gives you something that resembles mashed potato, which was sold to great effect by saucepan-like robots on telly ads. However, for our benefit it is also the name of a very clever little compression and decompression utility by Dr. Carlo Delhez, that runs on the QL. So now you can have SMASH with chips - microchips at least!

I have long pondered about using a method of storing files in compressed form. I obtained the popular ZIP and UNZIP utilities, and unfortunately, use the latter more than the former - usually when decompressing files in Club QL International, the disk based magazine. I just couldn't get into ZIP at all.

SMASH however, is very different. The "manual" if you can use that word, is only a couple or pages in length. The real beauty or this utility is that you can compress a file, and the compressed end result is STILL executable!! No, I'm not kidding! It works in much the same way as ZIP or other archivers, but instead writes the decompression code in front of the compressed data, and the compressed file therefore becomes a much smaller executable - basically a SMASHed job.

To use it, you simply EXEC SMASH, (or use TK2's EX command) and use the following syntax:

```
EX SMASH;'DEV_UNSMASHED DEV_SMASHED'
```

Where DEV is the device to be used, UNSMASHED is the original file, and SMASHED is the new compressed, smaller file.

Therefore, if you use:

```
EX SMASH;'FLP2_STARTFILE RAM1_NEWFILE'
```

This would load up SMASH from the default source, usually FLP1_, call the file to be compressed from FLP2_ (which is called STARTFILE in this example) and puts the finished SMASHed file on RAM1_, which will be called NEWFILE. The end result (NEWFILE) can still be EXEC'd as normal. Nothing could be simpler.

As I said, ZIP's biggest disadvantage is that a zipped file must first be unzipped before it can be used, which means finding your copy of UNZIP, setting the DATA_USE etc, and general messing around making sure each file is in the right place. This is not the case with SMASHed files. a SMASHed file will even load up quicker than the original one - simply because on faster QL sytems (gold card, super gold, QXL or QPC) loading the smaller file and decompressing it in memory is quicker than loading the larger uncompressed one directly - especially from floppy disk or, heaven forbid - microdrive.

In the _txt file that accompanies the program, the Author gives us his "top 10" files in terms of the amount of compression achieved - expressed as percentages. Jochen will probably be amazed to hear that the Diamonds game he markets is top of the list, with a whopping 80.8% compression!! Digital Precisions PC Emulator, CONQUEROR, achieves a respectable 56.8% compression rate. The average compression rate of the 10 programs is 63.5%, but the author says 40% is the minimum typical compression achieved. So, effectively doubling the storage capacity of any given medium.

Not having a Hard drive, and with having a slow Trump Card system, I find SMASH to be a very useful way of freeing up space on floppy drives, and still be able to run those programs when you need them, without the hassle of decompressing from one medium to another. I can now fit files that would only fit on a HD disk previously on a single DD disk now.

On the down side, SMASH only works on EXECutable files, i.e. programs that are started using EXEC, EXEC_W, EX, or EW. therfore anyone wishing to SMASH their BASIC programs will be unable to do so, and this is where ZIP (and many other archivers) triumph.

Aside from that, SMASH's ease of use, its ability to maintain the accessability of a program, and its effectiveness, make it a useful addition to anyones software collection. It is available in the Public Domain, from Steve Johnson.

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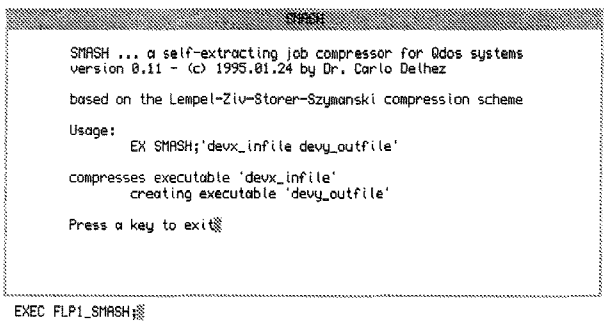

The Editor VERY Special edition. (Large)

Dennis Smith.

After reading the article from Stephen A Hall on a rather nice way to find the altered bytes and patch the Editor (the program not the person!) I jumped straight in and had a go. I thought his method was great, we must all kick ourselves for not thinking of it first. Unfortunately the first attempt failed for obvious reasons. My Editor is configured to NOT be in the top left hand corner of the screen, so, although the patch correctly sets the various sizes that you may require it does not take into account the location of the window offset. Trying to start the Editor that falls off the right hand side (or bottom) of the screen will not work. Here is my simple method to correct this.

Configure the Editor how you want it to look in the normal way, but when it asks you to define the window size make sure that you set the window size to maximum. This will make sure that your window is in the top lefthandcorner. All done, EXecute this Editor to make sure it works and looks right because if you want to change the appearance later (after the patch) you will have to re-configure and therefore re-patch. Now you have a working small Editor, READ the Editor into itself with the RU command

‹F3› RU.win1_edt_bin. ‹ENTER›

search for the word config

‹F3› f.config. ‹ENTER›

After the word 'config' is a space which is ascii code value 32 and from there on is a series of strange characters, listed below are all their ascii values after 'config' starting with space:

32 225 40 228 22 227 160 228 71 228 68 228 72

The ASCII values indicated above are the four that alter for the Editor window size and the window origin. The first altered two is the size and the second altered two is the window origin (top left corner). Shown is the settings for 1024x512 Aurora screen size. The key presses to obtain these ASCII values are found in the QL 'big black book' concepts section, page 5.

■

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QPC

The QL-Emulator for PC

With QPC, you can run most of the current QL-software on PC's. You need at least a 486, but QPC will run faster on a Pentium. 4MB RAM and DOS 6.xx or 8MB RAM and Windows95™. QPC can now easily be installed to be called from Win95 - the manual has been rewritten!

A double-mouseclick can turn your PC into a better QDOS-compatible system. Better, because with QPC you get Tony Tebby's new operating system SMSQ/E for QPC - it is included in the price!

Do not worry about any soldering, plug-in cards etc. - QPC is a software emulator, it does not need any extra hardware! This means, you can install it even on laptops!

QPC offers access to the serial ports (up to 57600 baud!), parallel port, harddisk and floppy disks. It can read and write QL and DOS floppy disks, so data exchange is easy. You can playback audio CDs even from within QPC. PS/2 and serial mice are supported.

The new display driver not only supports 512x256, 640x350, 640x480 and 800x600 pixel resolutions, but with the new VESA support also even higher ones (e.g. 1024x768).

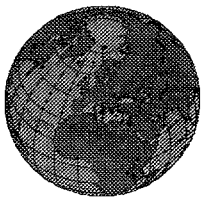
QPC is not expensive: you get the emulator plus the operating system SMSQ/E for only **DM 249,-**

If you own SMSQ/E for another system you pay only **DM 199,-**

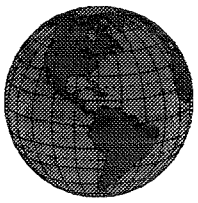
If you want to get the excellent CueShell Desktop program from Albin Hesser bundled with QPC, just add **DM 40,-**

Test QPC!

A demo version which will do everything the full version does (except writing to floppy and harddisk) is available for only DM 6,- including p&p (or send 3 international Reply Coupons).



The QL Show Agenda



Saturday, 19th of July 1997	London QL Workshop and show. 10:00 - 16:00. St Helen's Church Hall, St Quintin Avenue, LONDON W10. Free parking. Nearest tube: Ladbroke Grove. Organiser: Tony Firshman (see TF Services ad for contact nos).
Saturday, 30th of Aug. 1997	Irish QL Show, Laragh Village Hall, Ireland (details below).
Saturday, 6th of Sept. 1997	The Netherlands, Eindhoven, St. Joris College - same venue as always.
Saturday, 13th of Sept. 1997	East Midlands Quanta Workshop, Selston Parish Hall, Selston, Nottingham, England. The venue is close to the M1 (Jnct. 27/28) and has easy parking on-site. Overnight accomodation a few miles away can be arranged. A good discount may be possible if there are enough staying, so please contact Graham Underwood 01909-531405 or Dennis Smith 01773-748740 to give them an idea how many rooms to book in advance.
Sunday, 5th of October 1997	Byfleet Village Hall, Surrey, England. Contact Tony Gordon 01372-458180 or Ken Bain 01932-347432.

2nd Sunday every Month	Quanta London Sub-Group meeting. St. Aloysius School Hall, Phoenix Road, NW1. Meeting starts at 13:00 and ends at 18:00. Contact Basil Lee 0181-789-1976 or basilee@mail.bogo.co.uk

If you need more details, please contact your local QL user group or QL Today!
You can help to turn QL shows into even more interesting events!

Also, if you (plan to) organise QL shows or regular local user group meetings, please let us know and we publish it here!

THE FIRST EVER SOUTHERN IRISH QL SHOW

The first ever Irish QL show will be taking place this summer. Although still very must in the preliminary stages of planning, the show is hopefully going ahead on the 30th August, 1997 in the Laragh Community Hall, Laragh, Glendalough, Co.Wicklow, Ireland. All are welcome to attend. Traders attending will include Q-Branch, Tony Firshman, and Stuart Honeyball (Miracle Systems) and possibly many others, as well as some popular QL faces.

With the forthcoming release of the Goldfire and Ultra Gold Cards, this show may have a lot to offer. Travel between Ireland and the UK is now so cheap this is an opportunity not to be missed.

Anyone interested in attending should contact Darren Branagh in Ireland on (+353)(404)45319 for advice, directions or booking for accomodation, as discounts are available. Darren himself is offering accomodation, so there should be plenty of "craic" on the night!!

Alternatively you can write him at The Falconry, Glenmacnass, Glendalough, Co. Wicklow, Rep. of Ireland. Hopefully It will be a major success, and if so, it will become a regular event in the QL calendar.

Darren would also like to hear from any QL users in the North of Ireland who would like to attend - as he is originally from Belfast and hasn't yet met any of the Northern QL gang, and hopefully many of them will come down for the show.